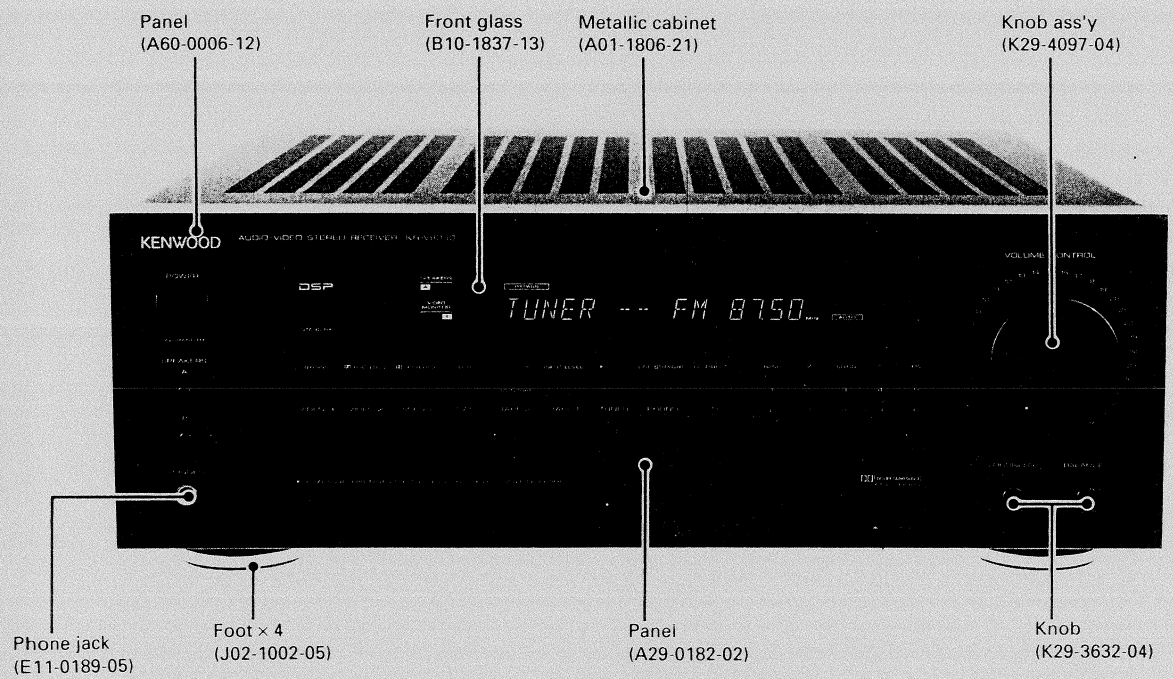
AUDIO-VIDEO STEREO RECEIVER

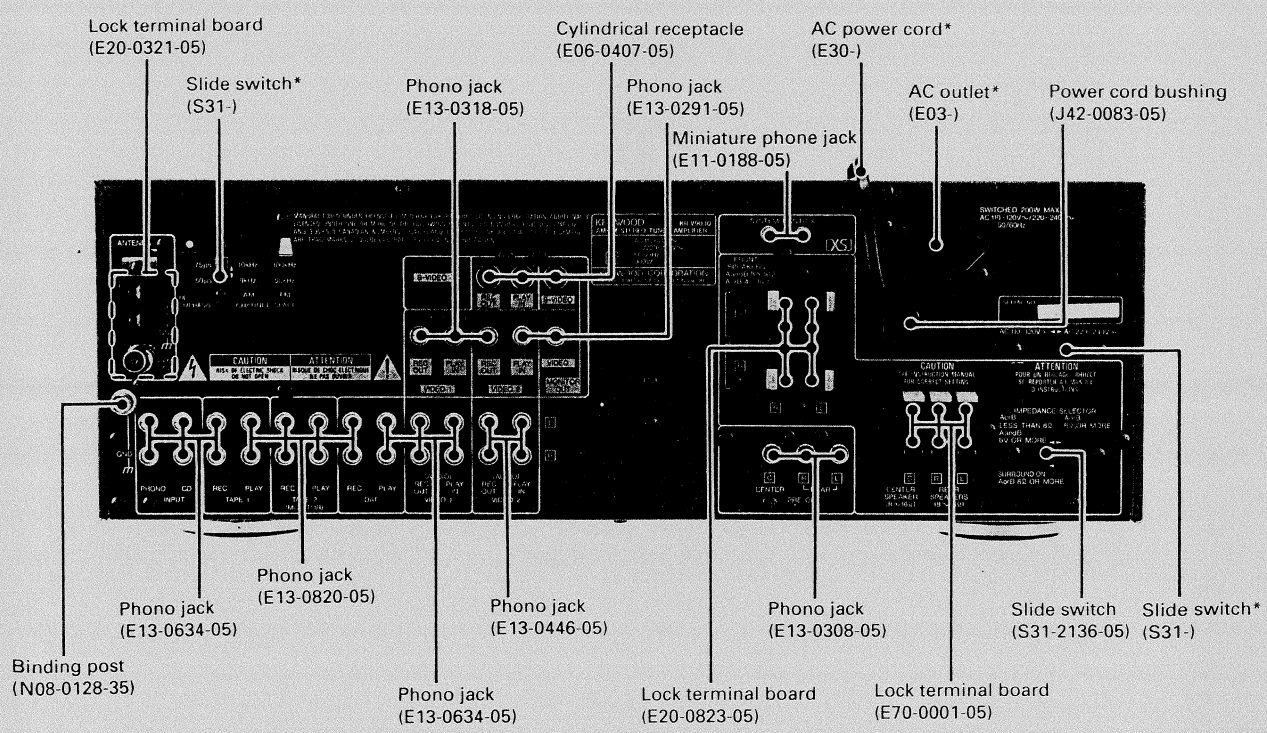
KR-V9030

SERVICE MANUAL

KENWOOD

B51-4315-00 (J) 2202





* Refer to parts list on page 69

KR-V9030

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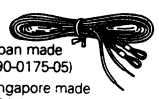
ACCESSORIES

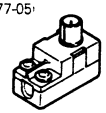
FM indoor antenna 1



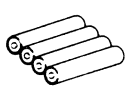
Japan made (T90-0175-05)
Singapore made (T90-0121-05)

75 Ω/300 Ω antenna adaptor 1

(T90-0177-05)

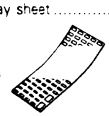


Batteries ("R03" or "AAA") 4

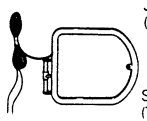


Overlay sheet 1

K, P, M, Y type only (G16-2772-08)



AM loop antenna 1



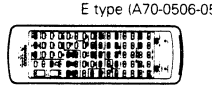
Japan made (T90-0173-05)
Singapore made (T90-0174-05)

Loop antenna holder 1

(J19-2815-04)

Remote control unit 1

K, P, M, Y type (A70-0504-05)
E type (A70-0506-05)



AC plug adaptor 1

M type only (E03-0115-05)

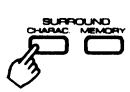
■ Naming a stored presence pattern [Remote control unit]

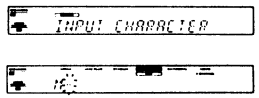
This function lets you freely create a name for a stored presence pattern and displays the name whenever that presence pattern is selected.

1 **Display the desired presence pattern.**

2 **Press the SURROUND CHARAC. key.**

- The unit enters character input ready mode.

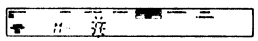




3 **Enter the desired characters.**

① Select a character.
The REAR LEVEL keys are the character input keys.

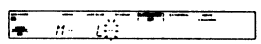
The displayed character changes each time the key is pressed.



← DOWN UP →

A B C .... X Y Z ∗ + − / 0 1 9
└ Blank position

② Move the character input position.
The CENTER LEVEL keys are the cursor keys.

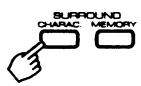


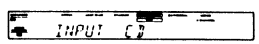
③ Repeat steps ① and ② until all necessary characters are entered.

- Up to 12 characters can be entered.

4 **Press the SURROUND CHARAC. key.**

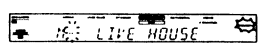
- This sets the entered characters.



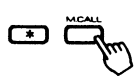


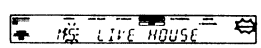
5 **Press the SURROUND MEMORY key.**

- Select M1 ~ M6.



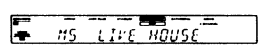
6 **Press the M.CALL key.**





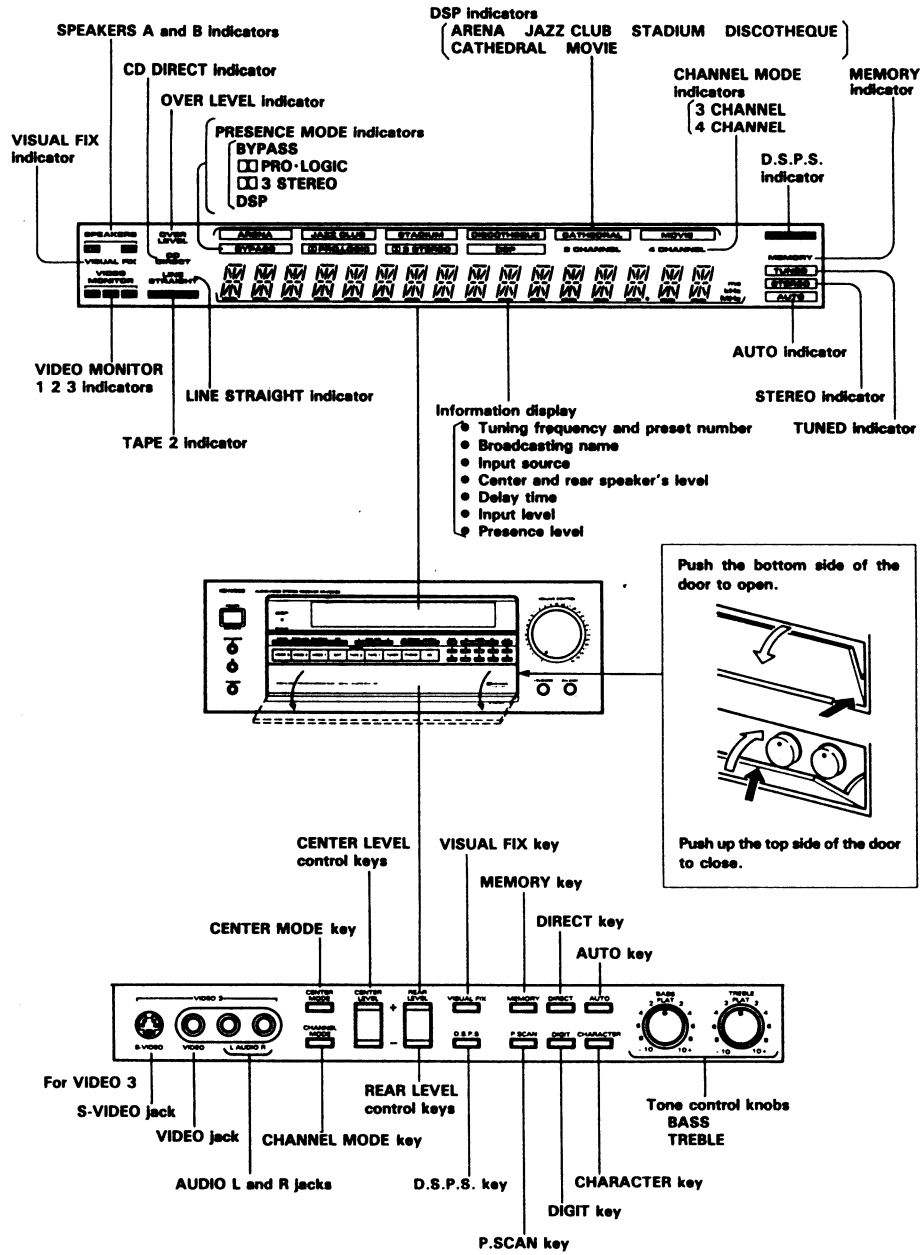
7 **Press the SURROUND MEMORY key.**

- Storing is completed.



Note:
If no characters are entered, the previous name is stored as is.

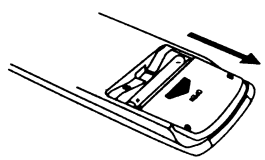
Refer to instruction manual for detail



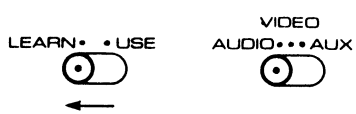
■ To erase all of the programmed contents

This procedure erases the programmed contents of all the learning keys in 3 modes, restoring the remote control unit to its initial state.

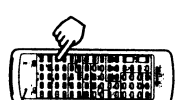
1 **Remove the cover.**



2 **Set the LEARN/USE switch to LEARN.**



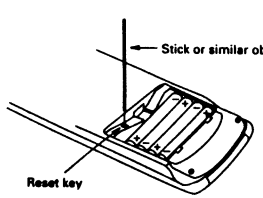
3 **Press one of the learning keys.**



The LEARN indicator lights up.

4 **Press the reset key.**

- Press within 30 seconds after pressing the learning key.



■ Operation of remote control unit

The supplied remote control unit has two operation modes: [USE], for operating various components in your system, and [LEARN], for programming ("learning") the remote control functions of other AV equipment.
There are three [USE] modes. One is AUDIO mode, for operating KENWOOD system audio components, another is VIDEO mode, for operating AV components, and the third is AUX mode, for operating other optional equipment.
[LEARN] mode is used to program the functions of other AV components into this remote control unit. This lets you perform the functions of several remote control units using a single remote control unit.

LEARN/USE switch

Set to USE for operating various components in AUDIO mode, VIDEO mode, or AUX mode.
Set to LEARN when programming function of other remote control unit.

LEARN • • USE

Mode switch

VIDEO
AUDIO • • • AUX

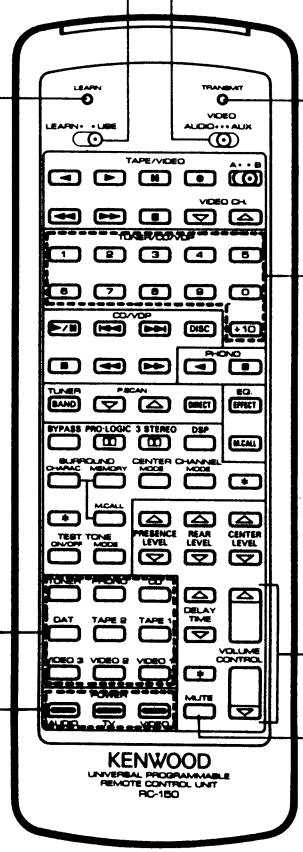
Set this switch according to the type of component you plan to operate.

LEARN indicator

Blinks or lights steadily during programming procedure.

TRANSMIT indicator

Lights up while the remote control signal is being transmitted.



Numeric keys

When the CD source is selected, these keys can be used as the numeric keys of the CD player.
When the TUNER source is selected, they can be used as the numeric keys of the tuner.
When the mode switch is set to VIDEO, a LD player (manufactured by KENWOOD) can also be operated.

How to enter numerals:
For 23 press [+10] twice and [3]
For 40 press [+10] four times and [0]

Input select keys

These keys operate the input selector.

VOLUME CONTROL keys

Adjust the volume. During operation, the VOLUME CONTROL on the front panel turns and the indicator on the knob blinks at high speed.

POWER keys

Turn the power of components ON/OFF.
For the TV and VIDEO keys, specific control signals should be programmed under them.

MUTE key

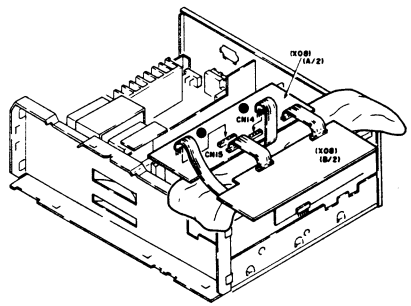
Press to reduce the volume temporarily.
During operation, the indicator on the VOLUME CONTROL knob blinks.

DISASSEMBLY FOR REPAIR

Removing the X08 PC board

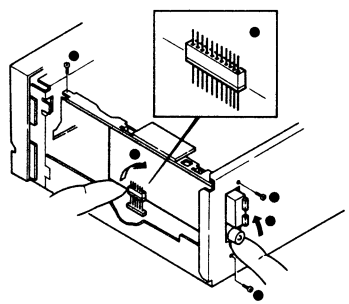
● Place the PC board <X13> in its original position
Remove the shield plate, and put the PC board on top of the set.

12. Pass the cord between the two PC boards and connect it to CN14 and CN15 (⑫)



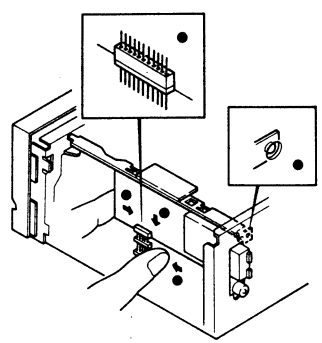
Removing the X05 PC board

13. Remove the three screws (⑬).
14. Slide the antenna terminal upwards (⑭).
15. Remove the connector (⑮).



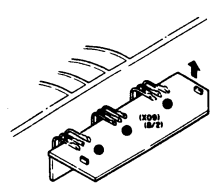
How to place the X05 PC board in its original position

16. Push the connector in the direction of the arrow (⑯).
17. Push the PC board in the direction of the arrow (⑰).
18. Insert the PC board (⑱).
19. Insert the projection into the hole in the rear panel (⑲).



Removing the X09 (B/2) PC board

20. Desolder the final transistor leads, and remove the PC board (⑳).



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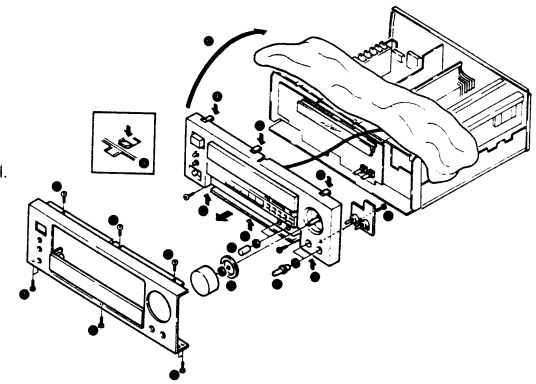
DISASSEMBLY FOR REPAIR

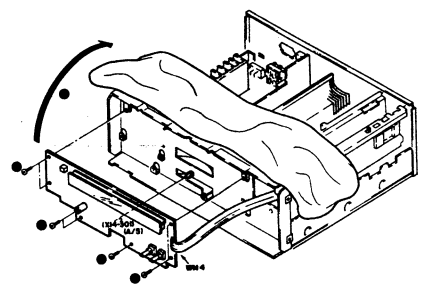
Removing the front panel, subpanel and X14 PC board

● Remove the case

1. Remove the eight screws (❶) from the front panel.
2. Remove the volume knob (❷).
3. Remove the four knobs (❸).
4. Remove the six hooks (❹) and remove the subpanel.
5. Remove the screw and remove the PC board (❺).
6. The subpanel can be put on the top of the set (❻).



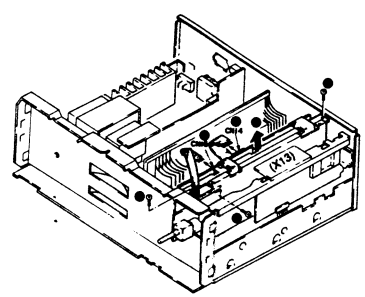
7. Remove the seven screws (❼) and draw out the WH4 cord.
8. The PC board can be put on the top of the set (❽).



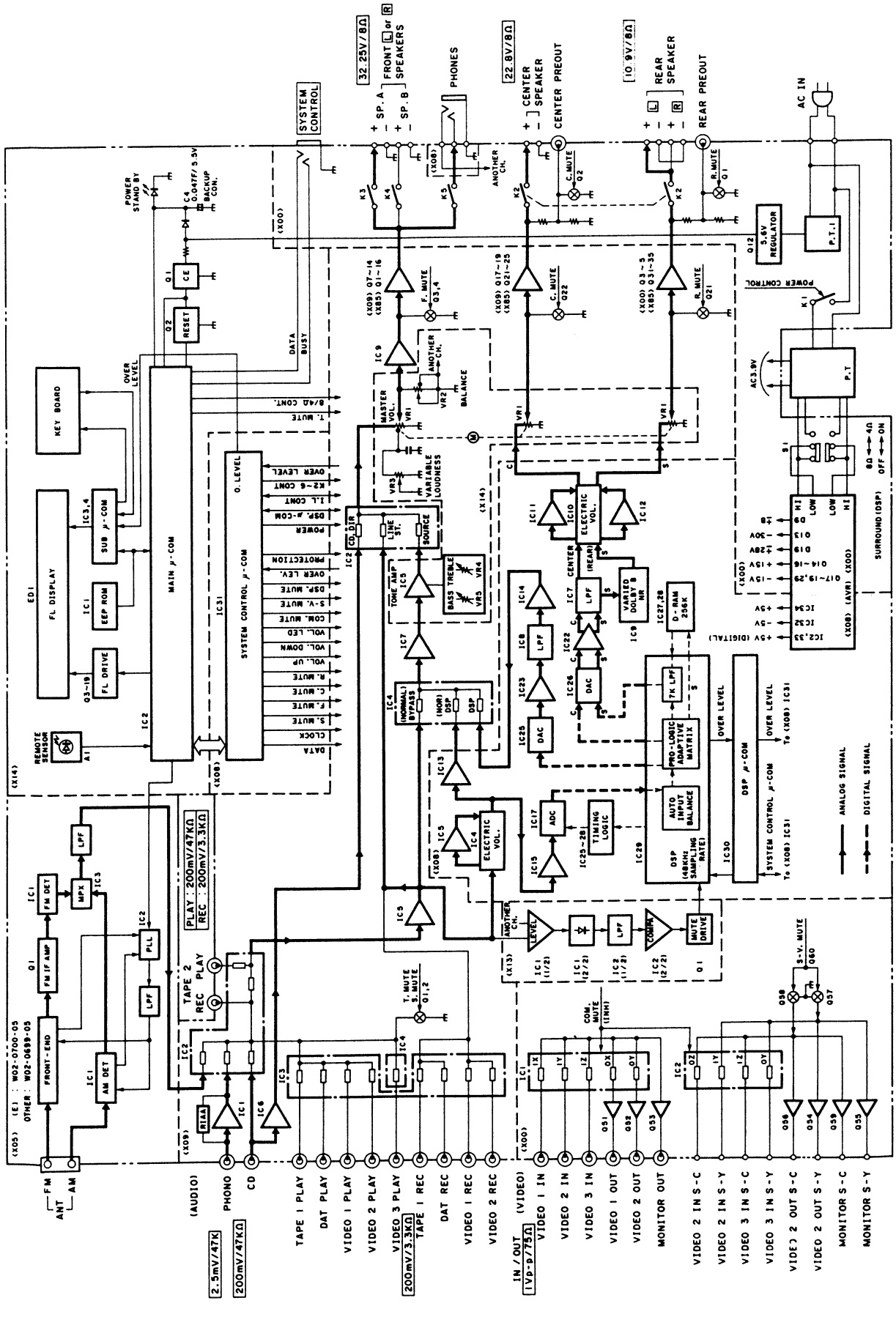
Removing the DSP PC board board.

● After removing the PC board <X13>

9. Remove the three screws (❾).
10. Disconnect the cord between CN15 and CN14(❿).
11. Remove the DSP board with the set (⓫).



BLOCK DIAGRAM



CIRCUIT DESCRIPTION

Description of functions

1. Feature

a. Input selector

VIDEO 1 and VIDEO 2 allow recording and playback of audio and video, but VIDEO 3 allows playback only.

b. Surround function (Available only when the rear panel switch is set to SURROUND ON.)

There are six surround modes: ARENA, JAZZ CLUB, STADIUM, DISCOTHEQUE, CATHEDRAL, and MOVIE.

Surround memory can be set for each of surround modes, and character of maximum 12.

c. Automatic function

The following operations are possible by connecting component units to the receiver with control lines.

1 Switching the amplifier selector by starting.
2 Starting a unit by selecting it using amplifier selector.
3 When a deck is in record mode, the amplifier select keys and play codes for other units become invalid.

DSP surround reproduction

1. Speaker modes

There are two modes for the KR-V9030 DSP surround reproduction, front 3-channel mode and 4-channel mode, depending on e speakers to be placed.

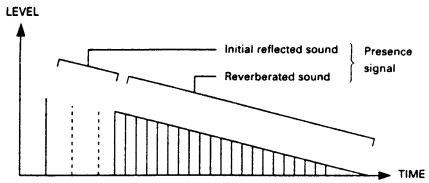
(1) Front 3-channel mode (Surround reproduction with the main left, right, and center speakers)

Since no rear speakers are used, the system configuration is simple, but the sound field is narrow between the right and left speakers if only indirect sound is applied. The indirect sound signal in the band that has high orientation to the ear is extracted with a band-pass filter, its phase controlled with a phase shifter, and is applied to the opposite channel to cancel crosstalk between ears. This provides a good surround effect in the wider range than the right and left speakers. Since the center fixing becomes low, it is corrected with a center speaker. The center speaker outputs reflected center sound, but its delay time is shorter than the right and left channels. Thus, the center fixing is assured by the Harse effect.

* Harse effect — The human ear feels that the sound source fixes in the direction of the sound that reaches it first. This is called the Harse effect.

(2) 4-channel mode

In the 4-channel mode, rear speakers are used together with three front speakers for surround reproduction in four channels. Normally, two rear speakers are used, but they output the same signal. With rear speakers, natural spreadness is felt, and each speaker reproduces indirect sound in its direction without special signal processing that is performed in the 3-channel mode.



2. Surround reproduction mode with the initial reflected sound

a. Jazz club

The initial reflected sound arrives for from 20 to 100 ms, and is attenuated in a short time. The cut-off frequency of the low-pass filter is 8 kHz, and contains comparatively many high frequency components.

b. Discotheque

The initial reflected sound is concentrated in a shorter time than the jazz club, and the delay time is set to 30 ms or less. The cut-off frequency of the low-pass filter is 6 kHz.

c. Movie

The initial reflected sound ranges from 60 to 200 ms, and its level is high. The reflected sound of the center channel is reduced to increase clearness of the words. The cut-off frequency of the low-pass filter is 7 kHz, like the dolby surround.

d. Stadium

The delay time of the initial reflected sound is long, and ranges from 100 to 300 ms. It is not reflected sound, but the sound from the speaker of the PA unit is simulated as an image. The cut-off frequency of the low-pass filter is 4 kHz.

3. Surround reproduction mode with reverberated sound

e. Arena

The sound field, mainly reverberated sound, is simulated with a com filter. The reverberation time is about 1.2 seconds. The cut-off frequency of the low-pass filter is 7 kHz.

f. Cathedral

Featured by very high-density reverberated sound. It is reproduced by a com filter and all-pass filter. The reverberation time is about 2.0 seconds. The cut-off frequency of the low-pass filter is 2 kHz, and the high-frequency range of the rebeverated sound is attenuate greatly.

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CIRCUIT DESCRIPTION

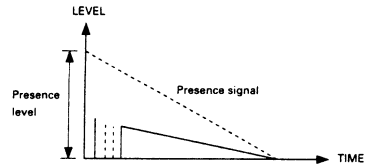


Figure a

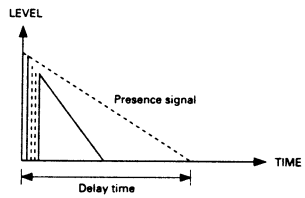


Figure b

4. Sound field parameters

Various parameters for determining the echo pattern must be controlled when surround reproduction is performed. For the KR-V9030, the user can adjust the presence level and delay time.

(1) Presence level

The level of indirect sound produced by the DSP can be varied in 2-dB steps from 0 to –20 dB. If a program source containing much indirect sound is reproduced, the indirect sound total produced by the DSP can be suppressed. (See Fig. a.)

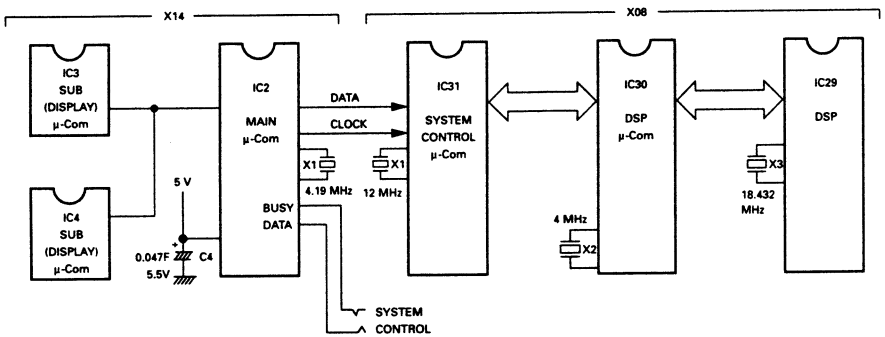
(2) Delay time

The delay time of the entire indirect sound produced by the DSP can be controlled. The delay time of the initial reflected sound that arrives first is shown on the display, and it can be varied in 5-ms steps from 5 to 100 ms.

The relationship between the positions of the sound source and listener can be controlled by changing the delay time. (See Fig. b.)

CIRCUIT DESCRIPTION

Microprocessor and back-up condenser of this unit



μPD7537ACU-220 μPD75116CW-179 μPD78214CW-744 LC665168-4677 LC83010

P.C.B.	X14-		X08-	
	SUB (DISPLAY) μ-Com IC3, 4	MAIN μ-Com IC2	SYSTEM CONTROL μ-Com IC31	D.S.P μ-Com IC30
Back-up Condenser	None	C4 0.047F 5.5V	None	None
Initialization (Reset)	→	Insert the AC plug to the outlet while pressing the "TUNER" key.	Pull out the AC plug from the outlet and then insert again.	Turn POWER off.

TEST MODE	Operation	Insert the AC plug to the outlet while pressing the selector "CD" key.
	Release	Pull out the AC plug from the outlet.
	Contents	(1) Turns on Power. (2) Turns on all the FL tubes. For details, refer to page 16.

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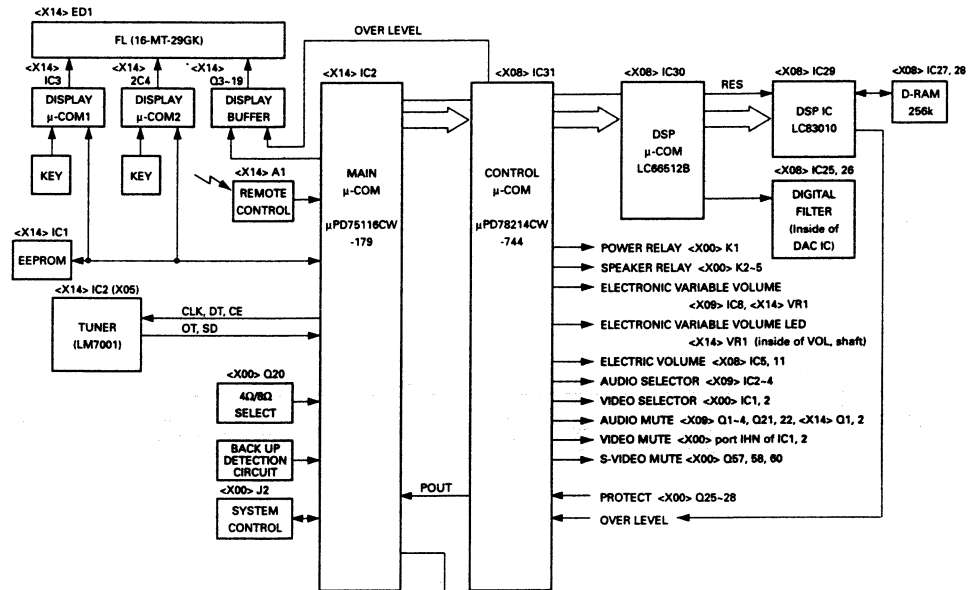
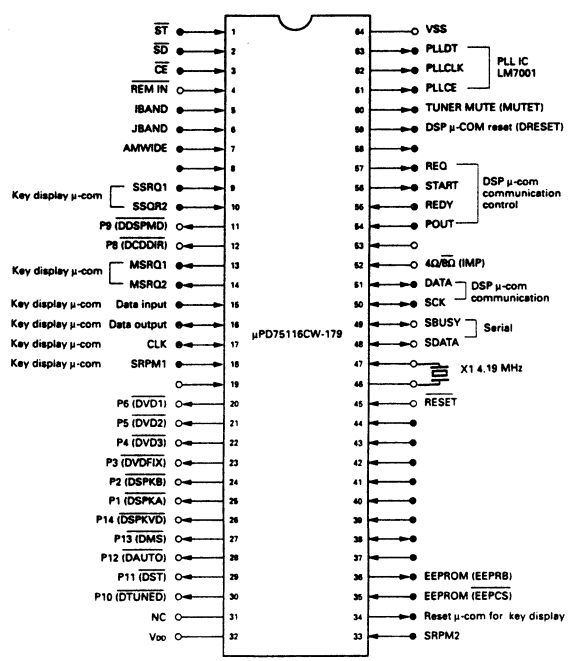
CIRCUIT DESCRIPTION

Block diagram around microprocessor



Main microprocessor: μPD75116CW-179 (X14 : IC2)



CIRCUIT DESCRIPTION

Pin function

Pin No.	Pin name	I/O	Name	Terminal management	Description
1	P13/INT3	I	$\overline{ST}$	PU	Stereo detection pin ACTIVE LOW (LOW = STEREO)
2	P12/INT2	I	$\overline{SD}$	PU	Broadcast detection pin ACTIVE LOW (LOW = with broadcast)
3	P11/INT1	I	$\overline{CE}$	PD	Back up detection pin ACTIVE LOW
4	P10/INT0	I	$\overline{REMIN}$	PU	Remote controller signal input pin ACTIVE LOW Normally HIGH
5	PTH03	I	IBAND	PD	Destination select pin LOW = K type HIGH = E type
6	PTH02	I	JBAND	PD	Destination select pin LOW = K or E type HIGH = J type
7	PTH01	I	AMWIDE	PD	K type AM received frequency range select LOW = 530 1700 kHz HIGH = 530 1610 kHz
8	PTH00	I		PD, PU, Vss	No used
9, 10	TI0, TI1	I	SSRQ1, SSRQ2	PD	SSRQ signal input pin of key display microprocessor (µPD7537ACU-220 IC3, 4)
11	P23	O	P9 ($\overline{DDSPMD}$)	PU	FL DSP MODE (ARENA, JAZZ CLUB, etc.) display pin ACTIVE LOW (LOW = light)
12	P22/PCL	O	P8 ($\overline{DCDDIR}$)	PU	FL "CD DIRECT" display pin ACTIVE LOW (LOW = light)
13, 14	P21/PT01 P22/PT00	O	MSRQ1, MSRQ2	PU	MSRQ signal output pin of key display microprocessor (µPD7537ACU-220 IC3, 4)
15	P03/SI	I	DATA INPUT	PU	EEPROM IC BA9021A DATA signal input pin of key display microprocessor (µPD7537ACU-220 IC3, 4)
16	P02/SO	I/O	DATA OUTPUT	PU	EEPROM IC BA9021A DATA signal output pin of key display microprocessor (µPD7537 ACU-220 IC3, 4)
17	P01/SCK	I/OI	CLK	PU	EEPROM IC BA9021A CLK signal output pin of key display microprocessor (µPD7537ACU-220 IC3, 4)
18	P00/INT4	I	SRPM1	PD	SRPM signal input pin of key display microprocessor (µPD7537ACU-220 IC3, 4)
19	P123	O		PU, PD	No used
20	P122	O	P6 ($\overline{DVD1}$)	PU	FL VIDEO MONITOR "1" display pin ACTIVE LOW (LOW = light)
21	P121	O	P5 ($\overline{DVD2}$)	PU	FL VIDEO MONITOR "2" display pin ACTIVE LOW (LOW = light)
22	P120	O	P4 ($\overline{DVD3}$)	PU	FL VIDEO MONITOR "3" display pin ACTIVE LOW (LOW = light)
23	P133	O	P3 ($\overline{DVDFIX}$)	PU	FL "VISUAL FIX" display pin ACTIVE LOW (LOW = light)
24	P132	O	P2 ($\overline{DSPKB}$)	PU	FL SPEAKERS "B" display pin ACTIVE LOW (LOW = light)
25	P131	O	P1 ($\overline{DSPKA}$)	PU	FL SPEAKERS "A" display pin ACTIVE LOW (LOW = light)
26	P130	O	P14 ($\overline{DSPKVD}$)	PU	FL "SPEAKERS", "VIDEO MONITOR" display pin ACTIVE LOW (LOW = light)
27	P143	O	P13 ($\overline{DMS}$)	PU	FL "ms" display pin ACTIVE LOW (LOW = light)
28	P142	O	P12 ($\overline{DAUTO}$)	PU	FL "AUTO" display pin ACTIVE LOW (LOW = light)
29	P141	O	P11 ($\overline{DST}$)	PU	FL "STEREO" display pin ACTIVE LOW (LOW = light)
30	P140	O	P10 ($\overline{DTUNE}$)	PU	FL "TUNED" display pin ACTIVE LOW (LOW = light)

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CIRCUIT DESCRIPTION

Pin No.	Pin name	I/O	Name	Terminal management	Description
31	NC			OP	
32	Vdd			BE	Power supply pin
33	P30	I	SRPM2	PD	SRPM signal input pin of key display microprocessor (µPD7537ACU-220 IC3)
34	P32	O	HRESET	PD	RESET signal output pin of key display microprocessor (µPD7537ACU-220 IC3, 4) HIGH (After reset main µ-com; for an instant) Normally LOW
35	P31	I	EEPRB	PD	EEPROM XBR9021B R/B signal input pin
36	P30	O	EEPCS	PD	EEPROM XBR9021B CS signal output pin ACTIVE LOW Normally HIGH
37~44	P43~P50	I			No used
45	$\overline{RESET}$	I			Reset signal input pin ACTIVE LOW Normally HIGH
46	X2				System clock oscillate pin (4.19 MHz)
47	X1	I			System clock oscillate pin (4.19 MHz)
48	P63	I/O	SDATA	PD	Serial communication DATA signal I/O pin Normally Input mode
49	P62	I/O	SBUSY	PD	Serial communication BUSY signal I/O pin Normally Input mode
50	P61	I/O	SYSCK	PU	SCK signal output pin for communicating to control µ-com (µPD78214CW-744) Output mode (only during communication) Normally Input mode
51	P60	I/O	SYDT	PU	DT signal output pin for communicating to control µ-com (µPD78214CW-744) Output mode (only during communication) Normally Input mode
52	P73	I	IMP	PU, PD	4Ω/8Ω select signal input pin LOW = 8Ω HIGH = 4Ω
53	P72	I		PU, PD	No used
54	P71	I	SYPOUT	PD	PROTECTION detection signal input pin from control µ-com (µPD78214CW-744) HIGH = PROTECT ON
55	P70	I	SYREDY	PU	REDY signal input pin for communicating to control µ-com (µPD78214CW-744)
56	P83	O	SYSTRT	PU	START signal output pin for communicating to control µ-com (µPD78214CW-744) LOW output (when started communication; for an instant) LOW output Normally High output
57	P82	O	SYREQ	PU	REQ signal output pin for communicating to control µ-com (µPD78214CW-744) During communication HIGH/LOW output Normally LOW output
58	P81	O	PU	No used	
59	P80	O	DRESET	PD	Reset signal output pin of control µ-com (µPD78214CW-744). HIGH (After reset main µ-com; for an instant) Normally HIGH output
60	P93	O	$\underline{MUTET}$	PD	MUTE signal output pin ACTIVE LOW Normally HIGH output
61	P92	O	PLLCE	PD	PLL IC LM7001 CE signal output pin Normally LOW output
62	P91	O	PLLCLK	PD	PLL IC LM7001 CL signal output pin Normally LOW output
63	P90	O	PLLDT	PD	PLL IC LM7001 DT signal output pin
64	Vss				GND pin

Terminal management: OP = Open, G = Vss, B = Vdd, BE = +5 V, PU = Pull Up, PD = Pull Down

CIRCUIT DESCRIPTION

Initialization

Operation

Initialization takes place in the following cases:

a. When the backup memory disappears.

b. When the power plug is inserted into an outlet while the TUNER key is held down.

Contents

	Function		State
	Power supply		OFF
Amplification section	SPEAKER A		ON
	SPEAKER B		OFF
	Muting		OFF
	AUDIO SELECTOR		TUNER
	TAPE2 MONITOR		OFF
	CD DIRECT		OFF
	LINE STRAIGHT		OFF
Video section	VIDEO MONITOR OUT		VIDEO1
	VISUAL FIX		OFF
Tuner section	BAND		FM
	FREQUENCY		Lower limit
	Tuning mode		AUTO
	Broadcast station display		None
	PRESET ch. display		None
Surround section	SURROUND		BYPASS
	DOLBY PRO LOGIC	CENTER MODE	NORMAL
		CENTER LEVEL	–20 dB
		REAR LEVEL	–20 dB
		DELAY TIME	20 ms
		TEST TONE	OFF
	DOLBY 3 STEREO	CENTER MODE	NORMAL
		CENTER LEVEL	–20 dB
		TEST TONE	OFF
	DSP	CH. MODE	4 CHANNEL
		DSP MODE	ARENA
		CENTER LEVEL	–20 dB
		REAR LEVEL	–20 dB
		DELAY TIME	60 ms
		PRESENCE LEVEL	–8 dB
		Each DSP MODE setting	Refer to DSP MODE initial setting.
	INPUT LEVEL		–20 dB
	SURROUND MEMORY contents		Refer to SURROUND MEMORY initial setting.
	SURROUND NAME display		None

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CIRCUIT DESCRIPTION

DSP MODE initial setting

CHANNEL MODE	DSP MODE	DELAY TIME	PRESENCE LEVEL
3 CH	ARENA	60 ms	–10 dB
3 CH	JAZZ CLUB	25 ms	–6 dB
3 CH	STADIUM	70 ms	–6 dB
3 CH	DISCOTHEQUE	30 ms	–4 dB
3 CH	CATHEDRAL	70 ms	–10 dB
3 CH	MOVIE	15 ms	–16 dB
4 CH	ARENA	60 ms	–8 dB
4 CH	JAZZ CLUB	30 ms	–6 dB
4 CH	STADIUM	60 ms	–6 dB
4 CH	DISCOTHEQUE	20 ms	–4 dB
4 CH	CATHEDRAL	70 ms	–6 dB
4 CH	MOVIE	10 ms	–12 dB

SURROUND MEMORY initial setting

	M1	M2	M3	M4	M5	M6
SURROUND MODE	DSP	DSP	DSP	DSP	DSP	DSP
CHANNEL MODE	4 CH	3 CH	4 CH	3 CH	4 CH	3 CH
CENTER MODE DSP MODE	ARENA	ARENA	JAZZ CLUB	JAZZ CLUB	MOVIE	MOVIE
CENTER LEVEL	–18 dB	–18 dB	–17 dB	–15 dB	–17 dB	–17 dB
REAR LEVEL	–20 dB	—	–18 dB	—	–18 dB	–
DELAY TIME	–40 ms	40 ms	20 ms	20 ms	10 ms	10 ms
PRESENCE LEVEL	–8 dB	–8 dB	–10 dB	–10 dB	–18 dB	–16 dB
SURROUND NAME	ARENA 1	ARENA 2	JAZZ CLUB 1	JAZZ CLUB 2	MOVIE 1	MOVIE 2

CIRCUIT DESCRIPTION

Test mode (Refer to page 10)

a. *Motor-driven volume*

- In the main unit test mode, the motor-driven volume is moved up or down by operating the TUNING **UP/DOWN** key.
- In the main unit test mode, the motor-driven volume is stopped by operating the **+10** key.
- In the main unit test mode, the TUNING **UP/DOWN** and **+10** keys do not have their original functions.

b. Test tone

- In the main unit test mode, if the surround mode is DOLBY PRO LOGIC or DOLBY 3 STEREO, and the **BAND** key is pressed, it functions as the remote controller TEST TONE ON/OFF key.
- In the main unit test mode, if TEST TONE is on, and the **CD DIRECT** key is pressed, it functions as the remote controller TEST TONE MODE key.
- In the main unit test mode, the **BAND** and **CD DIRECT** keys do not have their original functions.

c. Level

- In the main unit test mode, the CENTER LEVEL key is valid and the CENTER LEVEL **UP (+)** key is pressed, the center level alternates among – ∞, –40, and 0 dB each time the key is pressed.
- In the main unit test mode, if the REAR LEVEL key is valid and the REAR LEVEL **UP (+)** key is pressed, the rear level alternates among – ∞, –40, and 0 dB each time the key is pressed.
- In the main unit test mode, the INPUT LEVEL key is valid and the INPUT LEVEL **UP (+)** key is pressed, the input level alternates among – ∞, –40, and 0 dB each time the key is pressed.
- In the main unit test mode, the PRESENCE LEVEL key is valid and the **AUTO** key is pressed, the input level alternates among –20, –10, and 0 dB each time the key is pressed. In the main unit test mode, the **AUTO** key does not have its original function.

d. Delay time

- In the main unit test mode, if the DELAY TIME UP/DOWN key is valid and the **LINE STRAIGHT** key is pressed, the delay time is changed by one cycle from its minimum value to maximum value for the SURROUND mode.
- In the main unit test mode, the **LINE STRAIGHT** key does not have its original function.

e. DSP adjustment mode [SURROUND ON/A or B 8Ω or more (on the rear panel)]

In the main unit test mode, if the DSP 4 ch ARENA (input level: 0 dB) is set, the THROUGH mode is entered, and a signal is output to the L → L, C, R → R, S.

Input "CD": 200 mV
INPUT LEVEL: –20 dB (INPUT LEVEL DOWN)
OUTPUT (X08 CN1)

1 PIN : R ch
2 PIN : GND
3 PIN : L ch
4 PIN : S (REAR) ch
5 PIN : C ch

} 300 mV/ch

Destination setting switches

Destination	IBAND (5)*	JBAND (6)*	AM WIDE (7)*	Band	Received frequency range	Channel space	Reference frequency
K1	L	L	L	FM	87.50~108.00 MHz	100 kHz	50 kHz
				AM	530~1700 kHz	10 kHz	10 kHz
K2	L	L	H	FM	87.50~108.00 MHz	100 kHz	50 kHz
				AM	530~1610 kHz	10 kHz	10 kHz
E	H	L	–	FM	87.50~108.00 MHz	50 kHz	50 kHz
				AM	531~1602 kHz	9 kHz	9 kHz
J	–	H	–	FM	76.00~90.00 MHz	100 kHz	50 kHz
				AM	531~1602 kHz	9 kHz	9 kHz

* Means the IC2 pin No.

PLL IC LM7001 (X05 : IC2)

	$\overline{B01}$ (7)*	$\overline{B03}$ (9)*
FM	1	0
AM	0	1
Except TUNER	0	0

* Means IC2 pin No.

	$\overline{B02}$ (8)*
AUTO	0
MONO	1

0 : SHORT
1 : OPEN

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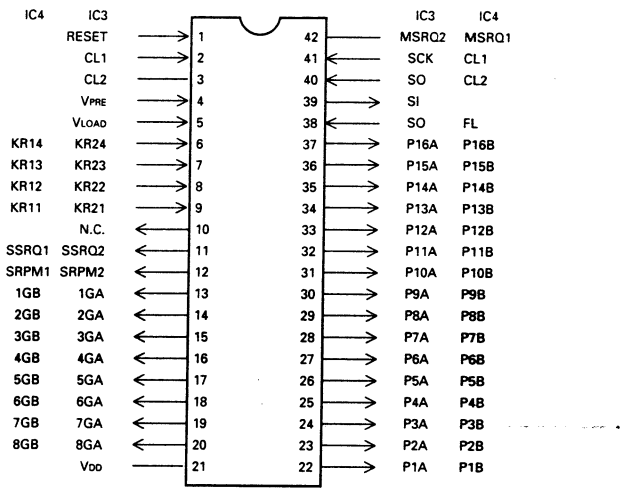
CIRCUIT DESCRIPTION

Sub-microprocessor:
μPD7537ACU-220 (X14: IC3, IC4)

Pin connection



Key matrix

O / I	1GA (13)	2GA (14)	3GA (15)	4GA (16)	5GA (17)	6GA (18)	7GA (19)	8GA (20)
KR21	INPUT LEVEL	DSP	3 STEREO	PRO LOGIC	BY PASS	SP B	SP A	POWER
KR22	5	+ 10	TUNE +	TUNE –	BAND	CD DIRECT	LINE STRAIGHT	INPUT LEVEL
KR23	7	8	9	0 –	1	2	3	4
KR24	TAPE 1	CHARACTER	AUTO	DIGIT	TUNER	PHONO	CD	6

O / I	4GB (16)	3GB (15)	2GB (14)	1GB (130
KR11	DAT	TAPE 2	DIRECT	VIDEO 1
KR12	REAR LEVEL +	CENTER LEVEL +	VISUAL FIX	MEMORY
KR13	DSPS	PSCAN	REAR LEVEL –	CENTER LEVEL –
KR14	CENTER MODE	CHANNEL MODE	VIDEO 2	VIDEO 3

CIRCUIT DESCRIPTION

Pin function

Pin No.	Pin name	I/O	IC 3	IC 4	Description
1	RESET	I	RESET		Display microprocessor reset pin. Controlled by main microprocessor. Reset by HRESET (B4 PIN) of μPD75116CW-179.
2	CL1	I			System clock oscillate pin of display microprocessor (600 kHz).
3	CL2	O			
4	V_{PRE}				Power supply pin of predriver.
5	V_{LOAD}				Negative power supply pin (–30 V).
6	P53	I	KR24	KR14	Return signal input pin of key matrix.
7	P52		KR23	KR13	
8	P51		KR22	KR12	
9	P50		KR21	KR11	
10	P23	O	N. C.		No used (open)
11	P22	O	SSRQ2	SSRQ1	Demand signal output pin for communicating from display microprocessor to main microprocessor. Normally - Low. When demanded to communication (when key is pressed) - High
12	P21	O	SRPM2	SRPM1	Permission signal input pin for communicating from display microprocessor to main microprocessor.
13 | 20	P103 | P110	O*	8GA | 1GA	8GB | 1GB	FL grid control signal. Controls 1GA (1GB) to 8GA (8GB) of fL.
21	V_{DD}				Power supply pin (+5 V)
22 | 37	P93 | P30	O*	P1A | P16A	P1B | P16B	FL segment control signal
38	P03/SI	I	SI		Input signal pin for communicating to main microprocessor. (Display data input)
39	P02/SO	O	SO		Output signal pin for communicating to main microprocessor. (Key data output)
40	P01/SCK	I	SCK		Clock signal pin for communicating to main microprocessor.
41	P00/INT0	I	MSRQ2	MSRQ1	Demand signal pin for communicationg from main microprocessor.
42	V_{SS}				GND pin

*: P ch open drain With mask option resistor

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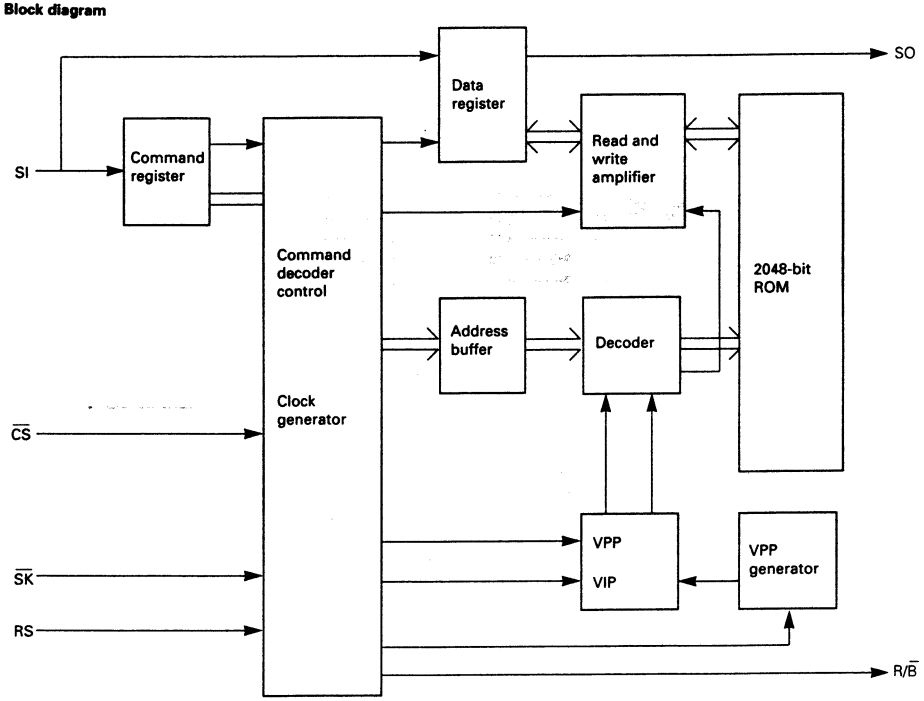
CIRCUIT DESCRIPTION

2K serial EEPROM: XRM9021A (X14: IC1)

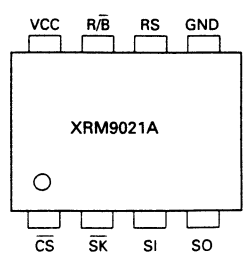
Features

- 128-word x 16-bit 2 K serial EEPROM
- Single power supply
- Serial data input/output
- Automatic erasing function for writing data
- Small package with DIP 8 pins
- Input/output is TTL compatible.
- High reliable fine CMOS process

Block diagram



Pin connection



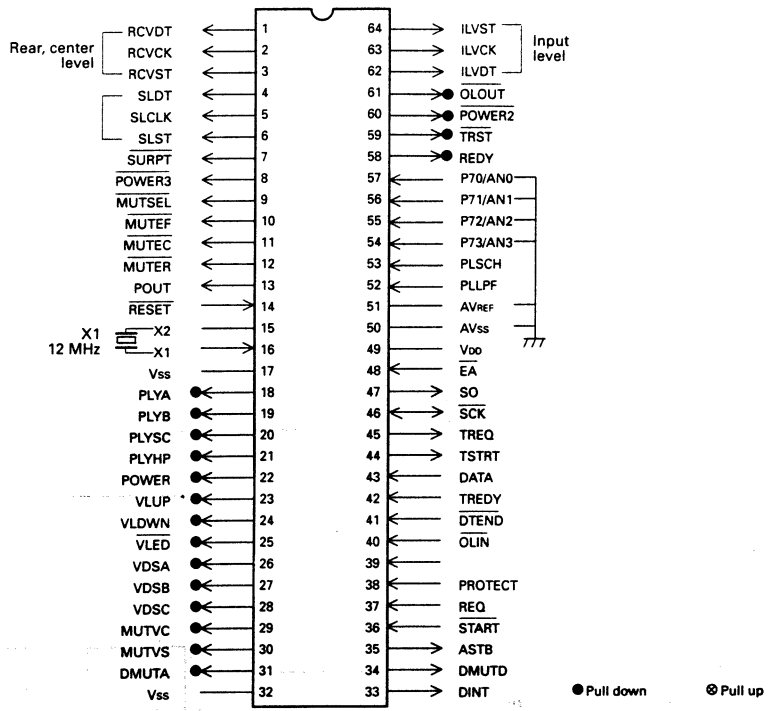
Pin function

Pin No.	Pin name	I/O	Description
1	CS	Input	Chip select input
2	SK	Input	Serial data clock input
3	SI	Input	Operating code, address and serial data input
4	SO	Output	Serial data output
5	GND	–	Gnd
6	RS	Input	Rest signal input
7	R/B	Output	READY, BUSY status signal output
8	VCC	–	Connect the power supply (5 V ± 10%)

CIRCUIT DESCRIPTION

System control microprocessor : μPD78214CW-744 (X08: IC31)

Terminal connection diagram



Pin function

Pin No.	Pin name	I/O	Name	Description
1	P03	O	RCVDT	Rear,center electric volume
2	P04	O	RCVCK	TC9213P control pin CK signal
3	P05	O	RCVST	STB signal
4	P06	O	SLDT	Switch array | IC DATA signal
5	P07	O	SLCLK	TC9162N, 9163N | CK signal
6	P67	O	SLST	TC9164N control pin | ST signal
7	P66	O	$\overline{\text{SURPT}}$	Surround (DSP IC) oscillate control H: Stop L: Oscillate
8	P65	O	$\overline{\text{POWER3}}$	Port used to synchronize with the timing of the power up of the D/A converter
9	P64	O	$\overline{\text{MUTSEL}}$	Selector mute pin H: MUTE OFF L: MUTE ON
10	P63	O	$\overline{\text{MUTEF}}$	Front signal mute pin H: MUTE OFF L: MUTE ON
11	P62	O	$\overline{\text{MUTEC}}$	Center signal mute pin H: MUTE OFF L: MUTE ON
12	P61	O	$\overline{\text{MUTER}}$	Rear signal mute pin H: MUTE OFF L: MUTE ON
13	P60	O	POUT	Pin that notifies the main μ-com of protection detection
14	$\overline{\text{RESET}}$	I		Reset pin

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CIRCUIT DESCRIPTION

Pin function

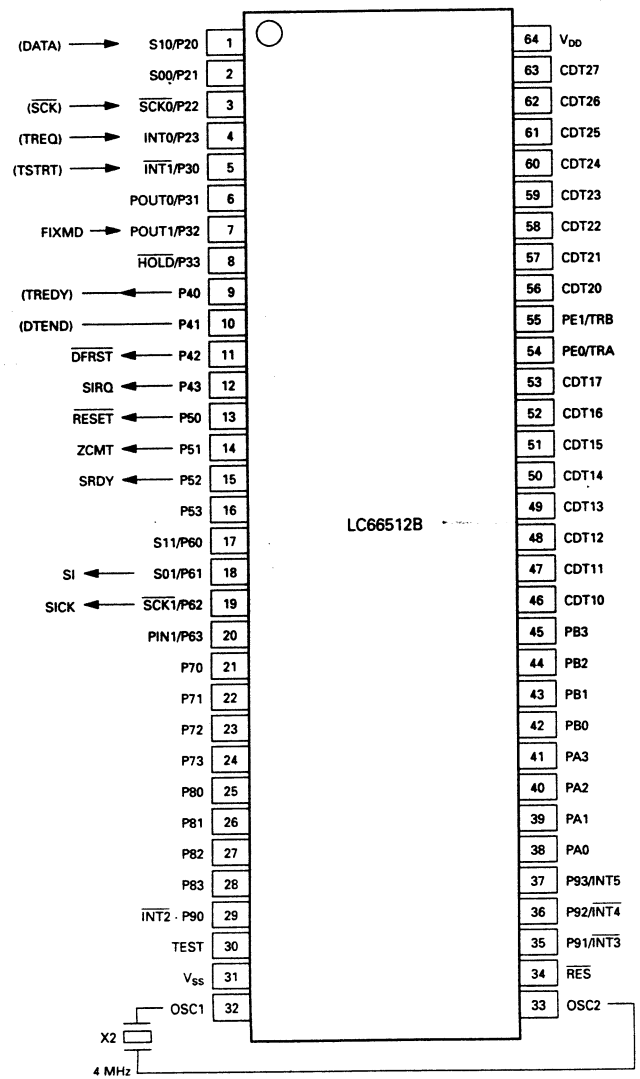
Pin No.	Pin name	I/O	Name	Description
15	X2			System clock oscillator connect pin
16	X1	I		
17	Vss	O		Gnd
18	P57	O	RLYA	Speaker A relay control pin L: Power OFF H: Power ON
19	P56	O	RLYB	Speaker B relay control pin L: Power OFF H: Power ON
20	P55	O	RLYSC	Speaker (SURROUND CENTER) relay control pin L: Power OFF H: Power ON
21	P54	O	RLYHP	Headphone relay control pin L: Power OFF H: Power ON
22	P53	O	POWER	Powersupply control pin L: POWER OFF H: POWER ON
23	P52	O	VLUP	Master volume UP control pin
24	P51	O	VLDWN	Master volume DOWN control pin
25	P50	O	$\overline{\text{VLED}}$	Master volume LED control pin L: LED ON H: LED OFF
26	P47	O	VDSA	Video selection control pin (V1 – V3: Input of VIDEO 1 – VIDEO 3)
27	P46	O	VDSB	
28	P45	O	VDSC	
29	P44	O	MUTVC	Composie video mute control pin
30	P43	O	MUTVS	S ch video mute control pin MUTE is OFF only entered the VIDEO 3 mode
31	P42	O	DMUTA	DSP analog mute control pin SURROUND ON: MUTE OFF SURROUND OFF: MUTE ON When switched : MUTE ON
32	Vss			Gnd
33	P41	O	DINT	No used
34	P40	O	DMUTD	DSP digital mute control pin
35	ASTB			No used
36	P20/NMI	I	$\overline{\text{START}}$	START signal input pin for communicating to main μ-com
37	P21	I	REQ	REQ signal input pin for communicating to main μ-com
38	P22	I	PROTECT	Protection signal detection pin
39	P23			No used
40	P24	I	$\overline{\text{OLIN}}$	Over level signal detection pin
41	P25	I	$\overline{\text{DTEND}}$	DTEND signal input pin for communicating to DSP IC control μ-com
42	P26	I	TREDY	TREDY signal input pin for communicating to DSP IC control μ-com
43	P27/SI	I	DATA	DATA signal input SI port of communicating to mainl μ-com
44	P30	O	TSTRT	START signal output pin for communicating to DSP IC control μ-com
45	P31	O	TREQ	REQ signal output pin for communicating to DSP IC control μ-com
46	P32/SCK	I/O	$\overline{\text{SCK}}$	SCK I/O pin for communicating to main μ-com and DSP IC control μ-com
47	P33/SO	O	SO	SO signal output pin for communicating to DSP IC control μ-com
48	EA			No used
49	VDD			Power supply pin
50,51	AVss, AVREF			No used
52 ~57	P75 ~ P70	I		No used
58	P34	O	REDY	REDY signal output pin for communicating to main μ-com
59	P35	O	$\overline{\text{TRST}}$	DSP IC control μ-com reset pin
60	P36	O	$\overline{\text{POWER2}}$	Port used to synchronize with the timing of the power up of the D/A converter
61	P37	O	OLOUT	Over level output pin L: FL light H: FL not light
62	P00	O	ILVDT	Input level electric volume DATA signal
63	P01	O	ILVCK	CK signal
64	P02	O	ILVST	ST signal

	V1	V2	V3
VDSA	0	1	1
VDSB	1	0	1
VDSC	1	1	0

Monitor -OUT	COMPOSITE S-OUT	V1	V2	V3
	-		V2	V3

CIRCUIT DESCRIPTION

DSP μ-Com: LC66516B-4677 (X08: IC30)



KR-V9030

CIRCUIT DESCRIPTION

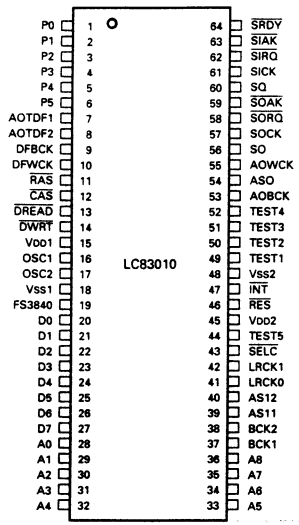
Pin function

Pin No.	Pin name	I/O	Name	Description
1	SI0/P20	I	DATA	DATA signal input pin from system control μ-com
2	SO0			No used
3	SCK/P22	I	SCK	Clock signal input pin from system control μ-com
4	INT0/P23	I	TREQ	TREQ signal input pin from system control μ-com
5	INT1/P30	I	TSTRT	TSTRT signal input pin from system control μ-com
6	Pout0/P31	I		No used
7	Pout1/P32	I	FIXMD	Fixation terminal mode setting pin. Low: Normal mode High: Fixation terminal mode
8	HOLD/P33	I	TSTRT	HOLD mode control input
9	P40	O	TREDY	TREDY signal output pin to system control μ-com
10	P41	O	DTEND	At mode change (command 0 ~ 2) and during clear the DRAM, transfer the data to DSP IC.
11	P42	O	DFRST	Digital filter reset signal output pin (Normally High)
12	P43	O	SIRQ	DSP IC LC83010 SIRQ signal output pin
13	P50	O	RES	DSP IC LC83010 Reset signal output pin (Normally High)
14	P51	O	ZCMT	Zero cross mute control signal output pin
15	P52	O	SRDY	DSP IC LC83010 SRDY signal output pin
16,17	P53, SU/P06			No used
18	SO1/P61	O	SI	DSP IC LC83010 SI signal output pin
19	SCK1/P62	O	SICK	DSP IC LC83010 SICK signal output pin
20 ~ 28	PIN1/P63 P70 ~ P73 P80 ~ P83	O		No used
29	INT2/P90			DSP IC LC83010 SIAK signal input pin
30	TEST			CPU test pin. Connected to Vss.
31	Vss			GND pin
32	OSC1	I		System clock oscillator pin
33	OSC2	O		System clock oscillator pin
34	RES	I		System reset signal input pin
35 ~ 37	P91 ~93 INT3 ~ INT 5			No used
38 ~ 45	PA0 ~ PA3 PB0 ~ PB3	I I		No used
46 ~ 53	PC0	I	CDT10 ~ 17	Correspond to bit 0 ~ 7 of data address 1 of command data in the fixed pin mode.
54	PE0/TRA	I		Correspond to 2 low-order bits of command data in the fixed pin mode. The fixed pin
55	PE1/TRB	I		mode can be set to 00, 01,02 or 03.
56 ~ 63	P35	I	CDT20 ~ 27	Corresponds to bit 0 ~ 7 of data address 2 of command data in the fixed pin mode.
64	VDD			Power supply

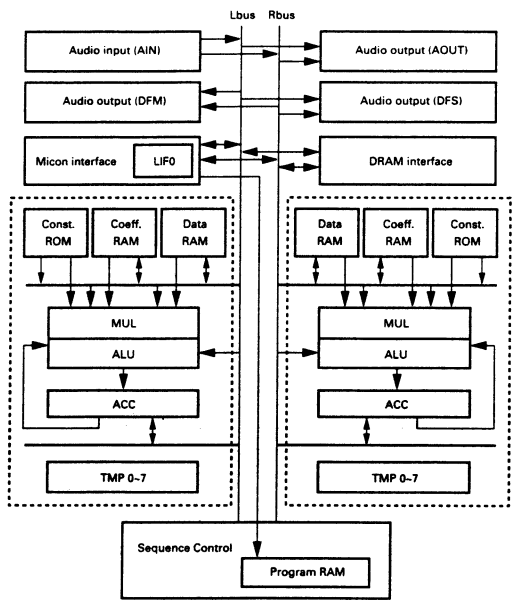
CIRCUIT DESCRIPTION

DSP IC : LC83010 (X08: IC29)

Pin connection



Block diagram



CIRCUIT DESCRIPTION

Pin function

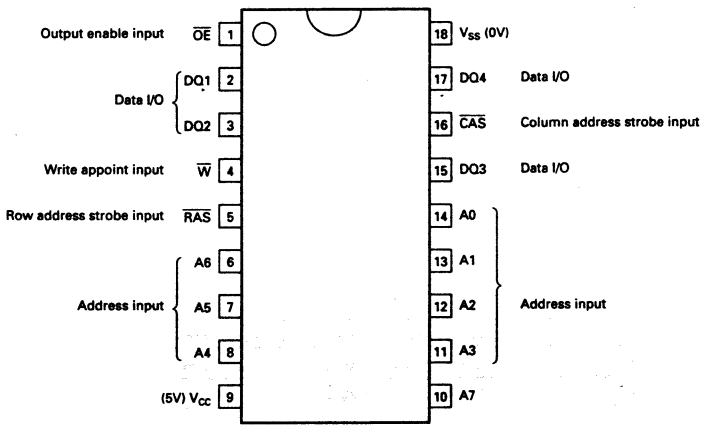
Pin No.	Pin name	I/O	Description
1	P0	I	Digital mute - High: mute; Low: unmute during DSP program
2	P1	I	Soft muting - High during DSP program: Soft mute with time constant of 1 ms; Low: Unmute
3	P2	O	Overflow detection If the input data from the A/D converter becomes the maximum positive or negative value a low signal is output, held for 100 ms, and goes high.
4	P3	I	Phase shifter control The phase shifter is turned on and off during 3-channel sound field program. Low: on; High; off. Always used with "LOW".
5	P4	I	Direct sound add control Control whether direct sound is added in the DSP during sound field program. High: Add; Low: Do not add. Always used with "LOW".
6	P5	I/O	General input/output port No used (open)
7	AOTDF2	O	Audio data output 1 C ch and S ch data is output during Dolby pro logic and 4-ch sound field. If 3 stereo and 3-CH are set, only C ch data is output.
8	AOTDF2	O	Audio data output 2 Decoded L/R data is output for Dolby. The L/R sound field signal is output for sound field.
9	DFBCK	O	Bit clock for AOTDF 1 and 2 48 fs bit clock is output.
10	DFWCK	O	Word clock for AOTDF 1 and 2 No used
11	RAS	O	For row address strobe DRAM access control
12	CAS	O	For column address strobe DRAM access control
13	DREAD	O	DRAM read control signal
14	DWRT	O	DRAM write control signal
15, 45	VDD1, 2	I	Power supply pin
18, 48	VSS1, 2		GND pin
16	OSC1	I	Crystal oscillator pin
17	OSC2	O	Crystal oscillator pin
19	FS3840	O	384fs output pin
20 ~ 27	D0 ~ D7	I/O	DRAM data I/O pin
28 ~ 36	A0 ~ A8	O	DRAM address output pin (A8 is no used)
37	BCK1	I	No used
38	BCK2	O	Bit clock output pin 32fs bit clock output for A/D
39	ASI1	I	No used
40	ASI2	I	Audio data input pin 2 Data input from A/D
41	LRCKO	O	L/R clock output pin
42	LRCKI	I	No used
43	SELC	I	Self oscillation and external clock input switching
44	TEST 5	O	Test pin Used by open
46	RES	I	Reset pin
47	INT	I	No used
49 ~ 52	TEST 1 ~ 4	I	Test pin Connected to GND
53	AOBCK	O	No used
54	ASO	O	Audio data output (overflow detection) Used by the the KR-V9030 to detect overflow for Dolby.
55 ~ 59	A0WCK etc.		No used
60	SI	I	Serial data input from μ-com
61	SICK	I	Serial clock input of SI input
62	SIRQ	I	SI request signal input
63	SIAK	O	Output signal to indicate that the SI serial communication is executing
64	SRDY	I	Input signal to indicate that the mail box communication is finished

DSP ↔ μ-com interface

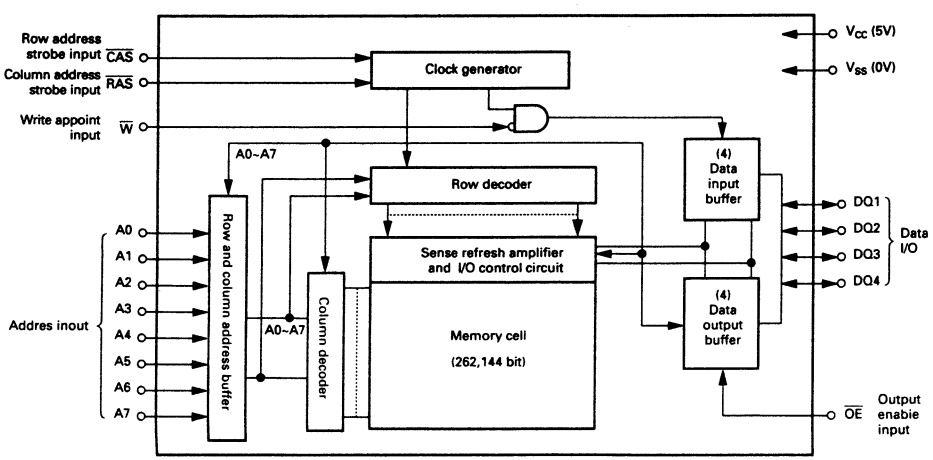
CIRCUIT DESCRIPTION

D-RAM IC : LM33464G-12 (X08 : IC27, 28)

Pin connection



Block Diagram

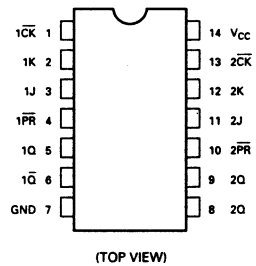


KR-V9030

CIRCUIT DESCRIPTION

Dual J-K flip flop with preset : TC74HC113AP (X08 : IC18)

Pin connection



(TOP VIEW)

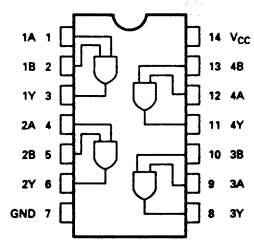
Truth table

INPUTS				OUTPUTS		FUNCTION
$\overline{PR}$	J	K	$\overline{CK}$	Q	$\overline{Q}$	
L	X	X	X	H	L	PRESET
H	L	L	↓	Qn	$\overline{Q}$n	NO CHANGE
H	L	H	↓	L	H	—
H	H	L	↓	H	L	—
H	H	H	↓	$\overline{Q}$n	Qn	TOGGLE
H	X	X	↑	Qn	$\overline{Q}$n	NO CHANGE

X : Don't care

Quad 2-input AND gate : TC74HC08AP (X08 : IC19)

Pin connection



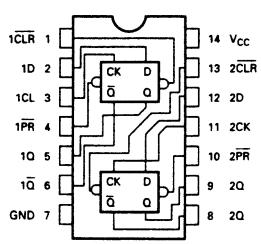
(TOP VIEW)

Truth table

A	B	Y
L	L	L
L	H	L
H	L	L
H	H	H

Dual D-type flip flop with preset and clear : TC74HC74AP (X08 :IC20, 21)

Pin connection



(TOP VIEW)

Truth table

INPUTS				OUTPUTS		FUNCTION
$\overline{CLR}$	$\overline{PR}$	D	CK	Q	$\overline{Q}$	
L	H	X	X	L	H	CLEAR
H	L	X	X	H	L	PRESET
L	L	X	X	H	H	—
H	H	L	↑	L	H	—
H	H	H	↑	H	L	—
H	H	X	↓	Qn	$\overline{Q}$n	NO CHANGE

X : Don't care

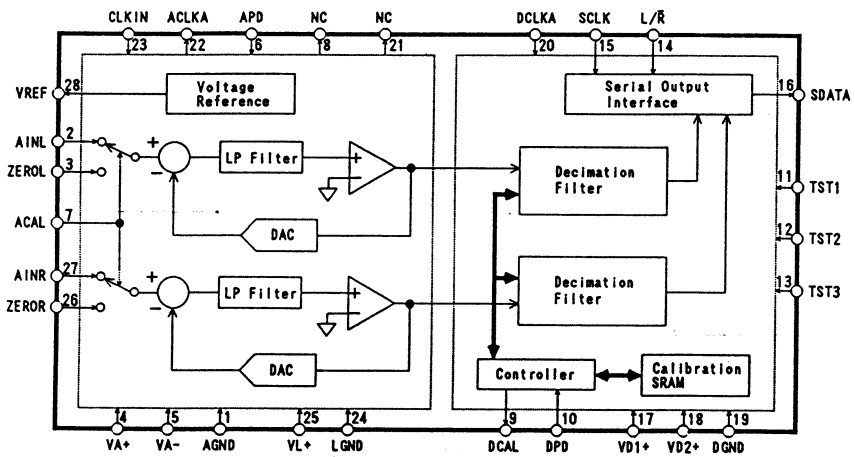
CIRCUIT DESCRIPTION

A/D converter IC: CS5326-KP (X08: IC 17)

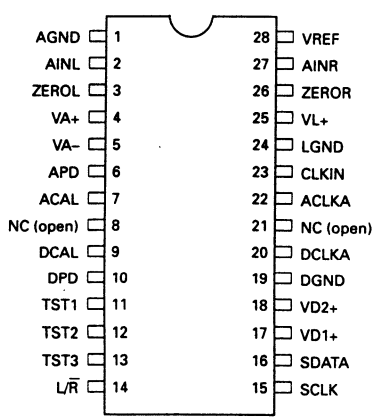
Features

- 18-bit stereo A/D conversion system
  Simultaneous two-channel sampling
  Loopback noise prevention digital filter built in
  Sample and hold circuit, reference voltage source built in
- 64 time over sampling method
  Support digital audio system sampling rates of 32, 44.1, and 48 kHz
- Excellent dynamic characteristics in all bands
  S/(N+D) : 95 dB
  Dynamic range: 96 dB
- Linear phase digital filter
  Pass band: 0 to (22/48) fs
  Pass band ripple: 0.001 dB
  Suppression range attenuation: 86 dB

Block diagram



Pin location



KR-V9030

CIRCUIT DESCRIPTION

Pin function

Pin No.	Pin name	I/O	Description
1	AGND	–	Analog GND pin
2	AINL	I	L ch analog input pin The full scale input level is ±3.68 V. It is recommended that a capacitor of 10 nF or more should be connected between this pin and AGND.
3	ZEROL	I	L ch zero level input pin Normally, the input voltage at this pin is the zero level, and the left channel offset is calibrated.
4	VA+	–	Analog positive power supply (+5 V)
5	VA–	–	Analog negative power supply (–5 V)
6	APD	I	Analog power down pin When this pin is high, the power down mode is entered. Normally, connected to the DPD pin. This pin can be used to synchronize several CS5328 samplings with the DPD pin.
7	ACAL	I	Analog calibration pin Normally, connected to the DCAL pin. When this pin is high, the L/R input channel is connected to the zero-level input pin (ZEROL, ZEROR). When low, connected to the analog input pin (AINL, AINR).
8	NC	–	No used (Open)
9	DCAL	O	Digital calibration pin Normally, used as an input signal for the ACAL pin. When a power down signal is input to the DPD pin, it rises immediately, and after the 4096L/R̄ period (about 85 ms for 6.144 MHz) after the DPD pin falls, goes low, indicating the end of offset calibration. If system calibration is performed, the channel select signal for the external MUX can be used.
10	DPD	I	Digital power down pin When this pin is high, the power down mode is entered. After the power is switched on, input a positive pulse to this pin at least once to perform calibration.
11	TST1	I	Test pin
12	TST2	I	
13	TST3	I	
14	L/R̄	I	Input channel select pin Selects data channel output from the SDATA pin. If high, L channel data is output, and if low, R channel data is output. The master clock divided by 128 is input.
15	SCLK	I	Serial data output clock pin Output data changes by one bit when the clock rises. Normally, the master clock divided by two is input.
16	SDATA	O	Serial data output pin Data is output as a complement of 2's from MSB in order. When SCLK rises, one bit of data is output. A low signal is output if 19 SCLK or more are input.
17	VD1+	–	Digital positive power supply (+5 V)
18	VD2+	–	
19	DGND	–	Digital GND pin
20	DCLKA	O	Digital system clock pin Connect to the DCLKA pin. The master clock divided by two is input.
21	NC	–	No used (Open)
22	ACLKA	O	Analog system clock pin Connect the DCLKA pin. The master clock divided by two is output.
23	CLKIN	I	Master clock pin The clock divided by two is in the sampling rate for the delta sigma modulator If the clock is 6.144 MHz, the output word rate per channel is 48 kHz.
24	LGND	–	Digital GND pin
25	VL+	–	Power supply for digital circuit (+5 V)
26	ZEROR	I	R channel zero-level input pin Normally, using the input voltage at this pin as zero level, the right channel offset is calibrated. Normally, connected to the GND pin.
27	AINR	I	R channel analog input pin The full scale input level is ±3.68 V. It is recommended that a capacitor of 10 nF or more should be connected between this pin and AGND.
28	VREF	O	Reference power source (–3.68 V) Normally, a 6.8 µF electrolytic capacitor and 0.1 µF ceramic capacitor are connected in parallel between this pin and AGND.

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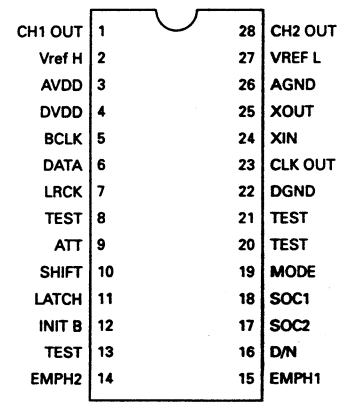
CIRCUIT DESCRIPTION

16 bit D/A converter for audio circuit(8 fs, with digital filter) : LC7883K (X08: IC25, 26)

Pin connection



Pin function

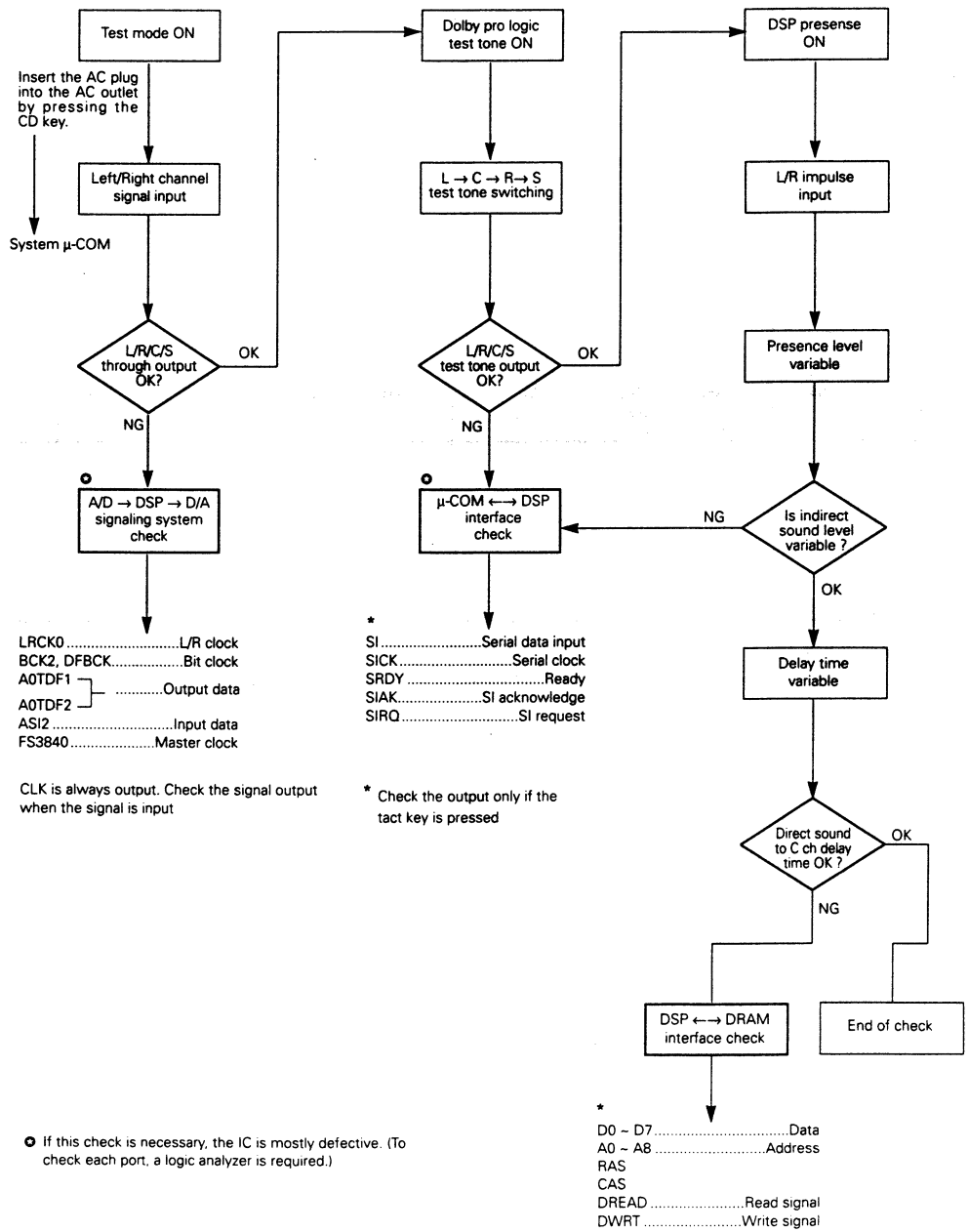
Pin No.	Pin name	I/O	Description
1	CH1OUT	O	DAC CH-1 output pin
2	Vref H	R	Reference voltage "H" input pin
3	AVDD	P	Power supply pin of analog
4	DVDD	P	Power supply pin of digital
5	BCLK	I	Bit clock pin
6	DATA	I	Digital audio data input pin Serial bit data is input from MSB to LSB.
7	LRCK	I	LR clock input pin LRCK = "H" CH 1 LRCK = "L" CH 2
8	TEST	I	Test pin (Normally "L")
9	ATT	I	Attenuation data input pin Serial bit data is input from LSB to MSB.
10	SHIFT	I	Attenuation data transfer clock input pin
11	LATCH	I	Attenuation data transfer latch clock input pin
12	INITB	I	Initialize signal input pin (Normally "L")
13	TEST	I	Test pin (Normally "L")
14	EMPH2	I	Deemphasis setting pin
15	EMPH1	I	
16	D/N	I	Double speed/ Normal speed select pin
17	SOC2	I	Input source select pin
18	SOC1	I	
19	MODE	I	Active mode setting pin
20	TEST	I	Test pin (Normally "L")
21	TEST	I	
22	DGND	P	GND pin of digital
23	CLKOUT	O	Clock output pin 392Fs: 1/2 XOUT 384Fs, 448Fs, 512Fs: 1/4 XOUT
24	XIN	I	Crystal oscillator input pin
25	XOUT	I	Crystal oscillator output pin
26	AGND	P	GND pin of analog
27	VrefL	R	Reference voltage "L" input pin
28	CH2OUT	I	DAC CH-2 output pin

I: INPUT PIN O: OUTPUT PIN P: POWER PIN R: REFERENCE VOLTAGE PIN

TROUBLESHOOTING

DSP circuit troubleshooting

DSP μ-COM ⟷ DSP ⟷ D-RAM Troubleshooting



ADJUSTMENT

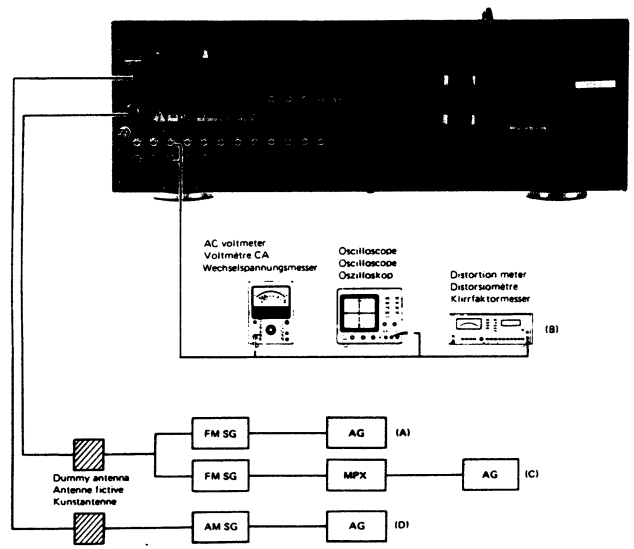
AM.Section: If alignment piont is "-", Confirm the value.
If not,replace the front end pack.

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION		(X05-)	SELECTOR: FM				
1	DISCRIMINATOR	(A) 98.0MHz 1kHz,±75kHz dev 60dBμ(ANT input)	Connect a DC voltmeter between TP3 and TP4. (X05-)	AUTO or MONO 98.0MHz	L4 (X05-)	0V	(a)
2	DISTORTION (MONO)	(C) 98.0MHz 1kHz,±68.25MHz dev Selector:L or R Pilot:±6.75kHz dev 60dBμ(ANT input)	(B)	98.0MHz	L5 (X05-)	Minimum distortion	
3	VCO	(A) 98.0MHz 0 dev 100dBμ(ANT input)	Connect a frequency counter between TP5 and GND. (X05-)	AUTO 98.0MHz	VR3 (X05-)	19.00kHz	(b)
4	DISTORTION (STEREO)	(C) 98.0MHz 1kHz,±68.25kHz dev Selector:L or R Pilot:±6.75kHz dev 60dBμ(ANT input)	(B)	98.0MHz	IFT (W02-)	Minimum distortion.(L or R)	
5	SEPARATION	(C) 98.0MHz Stereo signal 60dB(ANT input)	(B)	AUTO 98.0MHz	VR4 (X05-)	Minimum crosstalk	
6	TUNING LEVEL	(A) 98.0MHz 0dev 14dBμ(ANT input) 75Ω	(B)	AUTO or MONO 98.0MHz	VR1 (X05-)	Adjust VR1 and stop at the point where ED1(TUNED)goes on.	
AM SECTION		(X05-)	SELECTOR: AM				
(1)	BAND EDGE (Low)	-	Connect a DC voltmeter between TP1(GND) and TP2.	-	L9 (X05-)	1.5V	(c)
(2)	BAND EDGE (High)	-	Connect a DC voltmeter between TP1(GND) and TP2.	-	TC2 (X05-)	8.0V	(c)
Repeat alignments (1) and (2) several times.							
(3)	RF ALIGNMENT (1)	(D) 600kHz 20dBμ(ANT input)	(B)	-	L8 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	
(4)	RF ALIGNMENT (2)	(D) 1400kHz 20dBμ(ANT input)	(B)	-	TC1 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	
Repeat alignments (3) and (4) several times.							
(5)	IF TRANSFORMER	(D) 1000kHz 20dBμ(ANT input)	(B)	-	L10 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	
(6)	TUNING LEVEL	(D) 1000(999)kHz 36dBμ(ANT input)	(B)	-	VR2 (X05-)	Adjust VR2 and stop at the point where ED1(TUNED) goes on.	
AUDIO SECTION							
<1>	IDLE CURRENT	-	(E) Connect a DC voltmeter across TP7 and TP8 (CP1:L) TP5 and TP6 (CP2:R) 1pin and 2pin of CN22. (CP3:C)	Volume:0	VR1(L) VR2(R) VR3(C) (X09-)	10mV	(d)

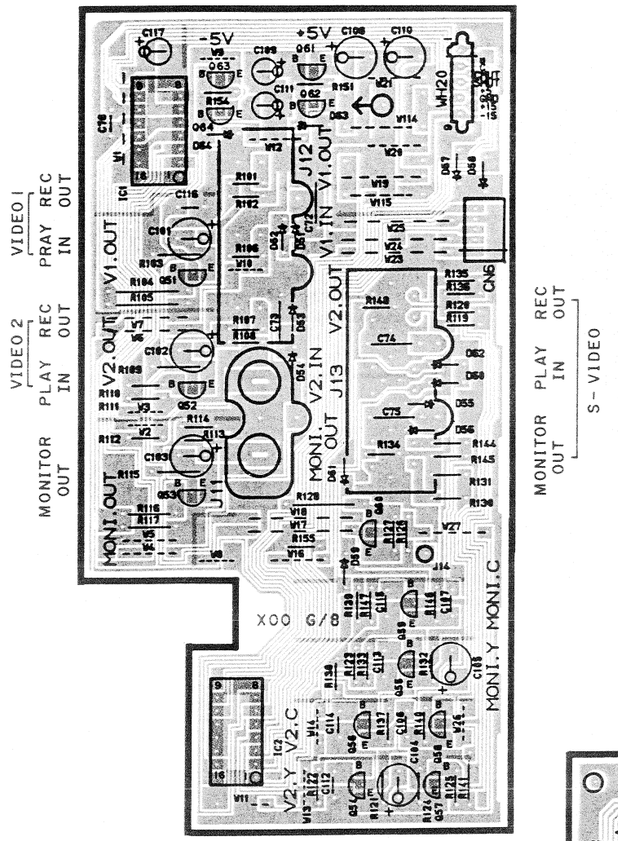
KR-V9030

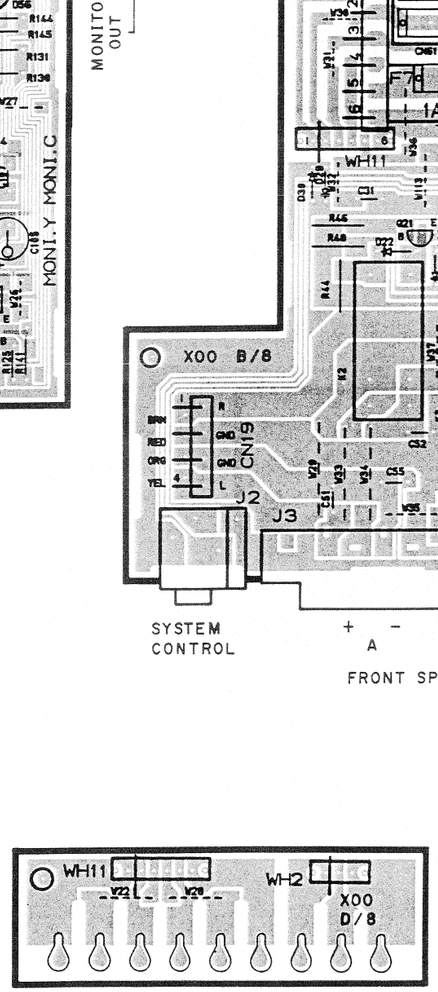
ADJUSTMENT

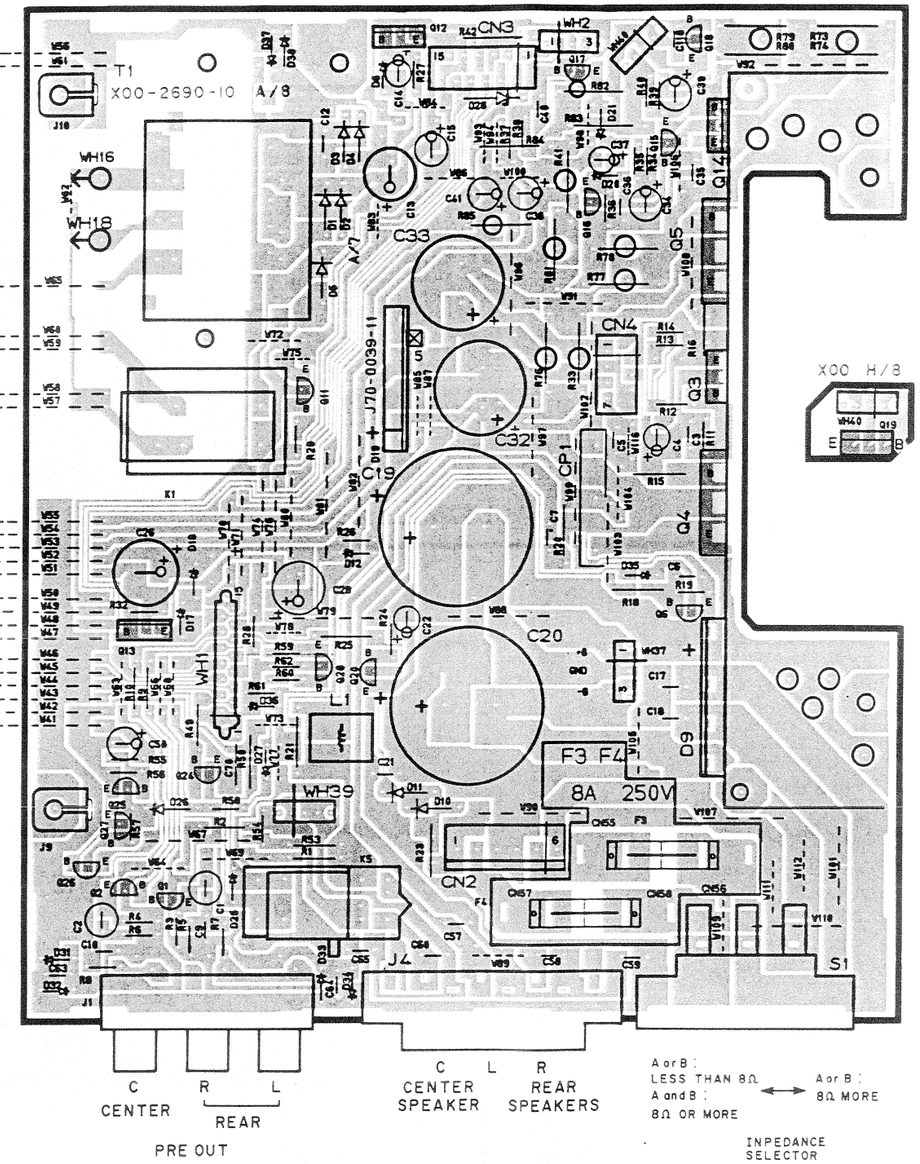
System connections

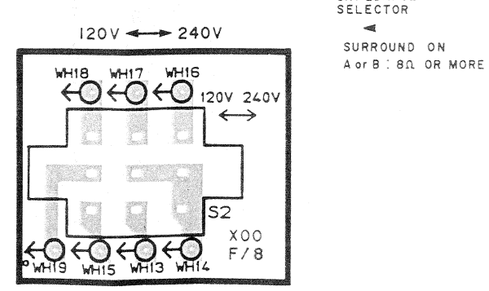


PC BOARD (component side view)



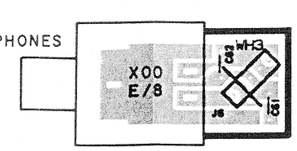




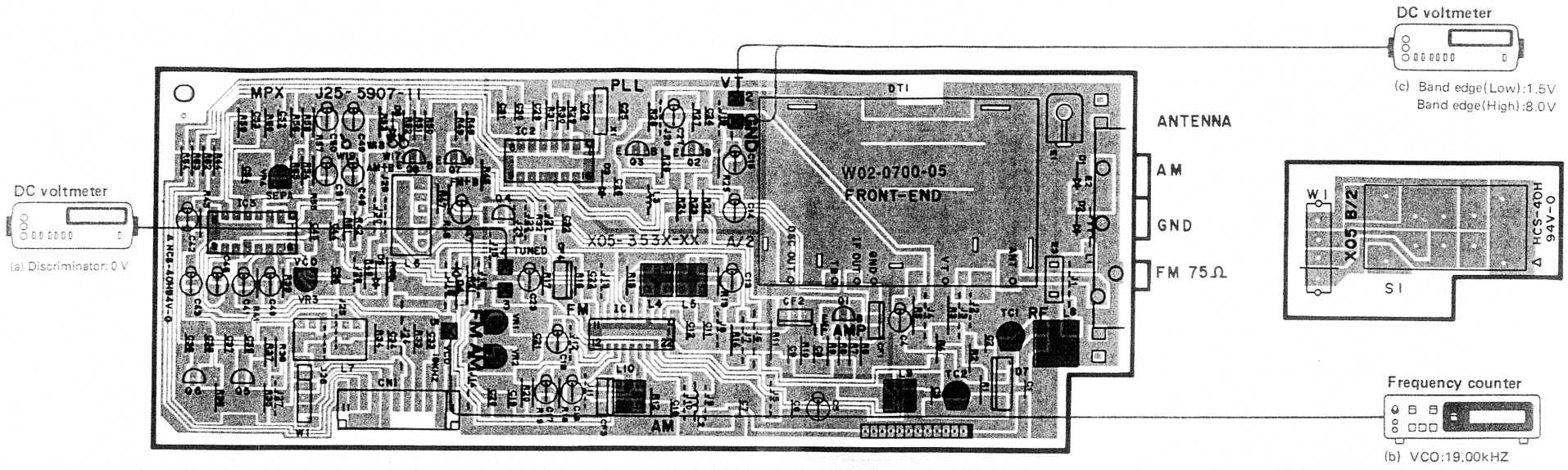


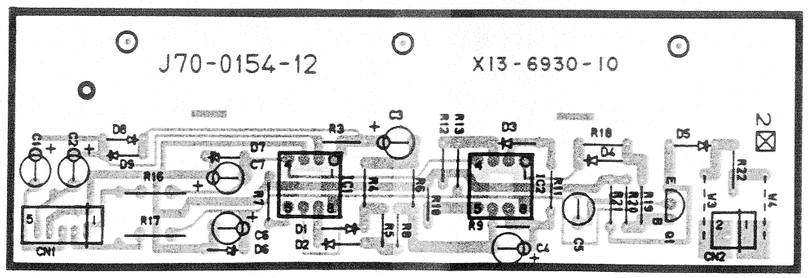
A or B : LESS THAN 8Ω ⟷ A or B : 8Ω MORE
A and B : 8Ω OR MORE

INPEDANCE SELECTOR
SURROUND ON
A or B : 8Ω OR MORE

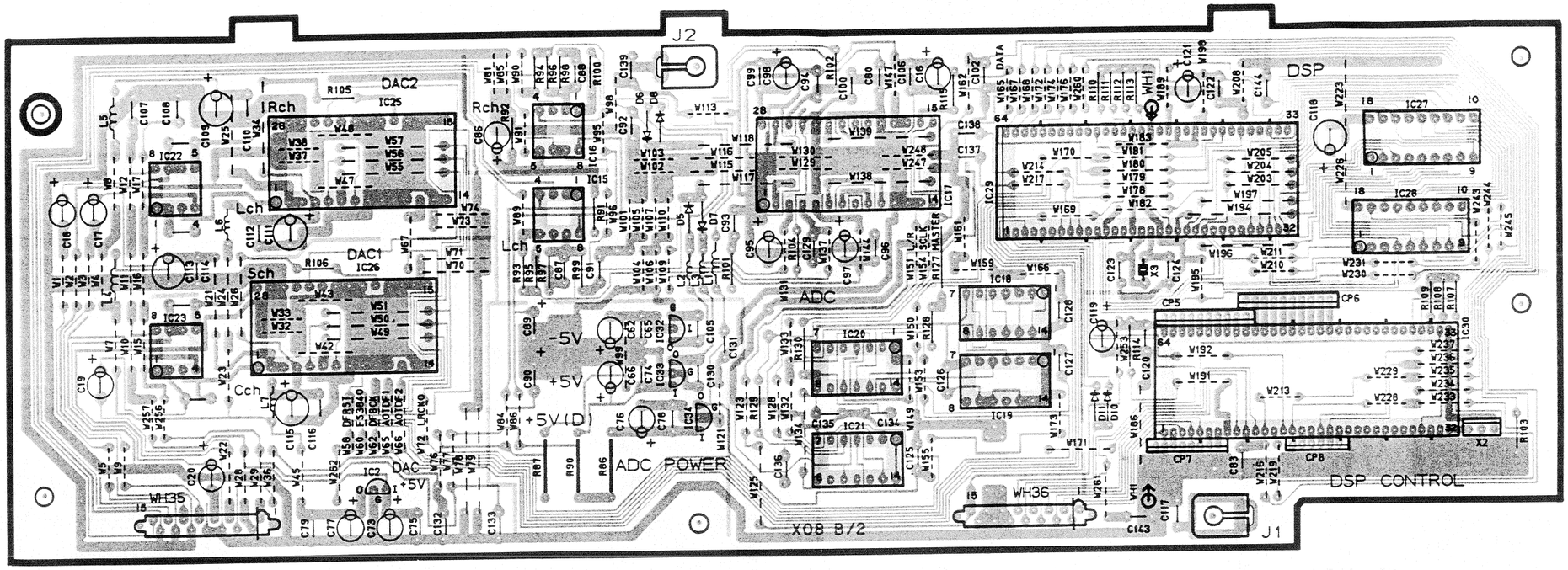


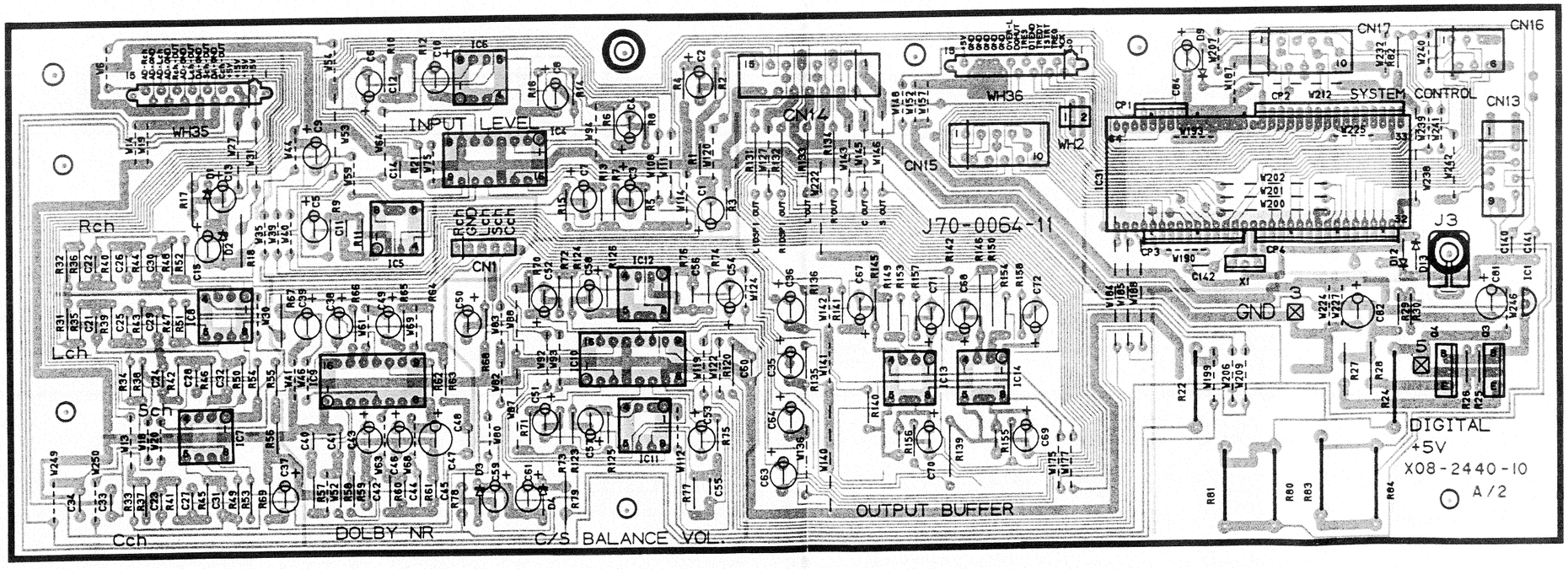
PC BOARD (component side view)



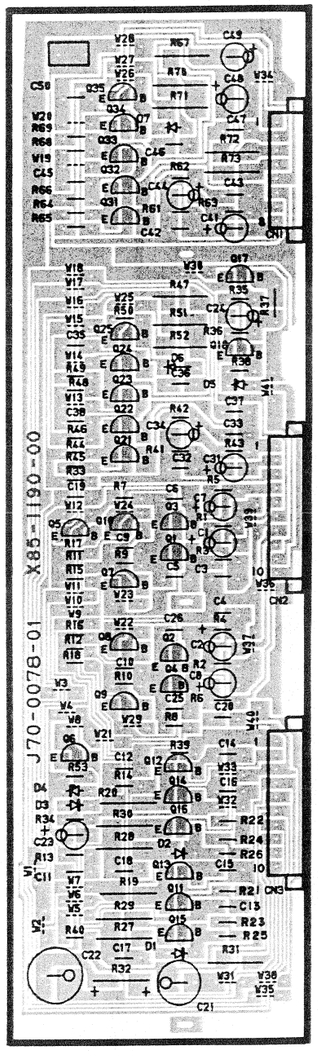


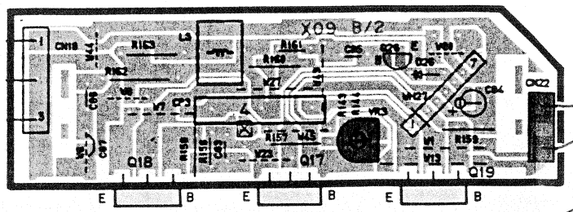
PC BOARD (component side view)





PC BOARD (component side view)





(d) Idle current : 10mV
DC voltmeter

(d) Idle current : 10mV
DC voltmeter

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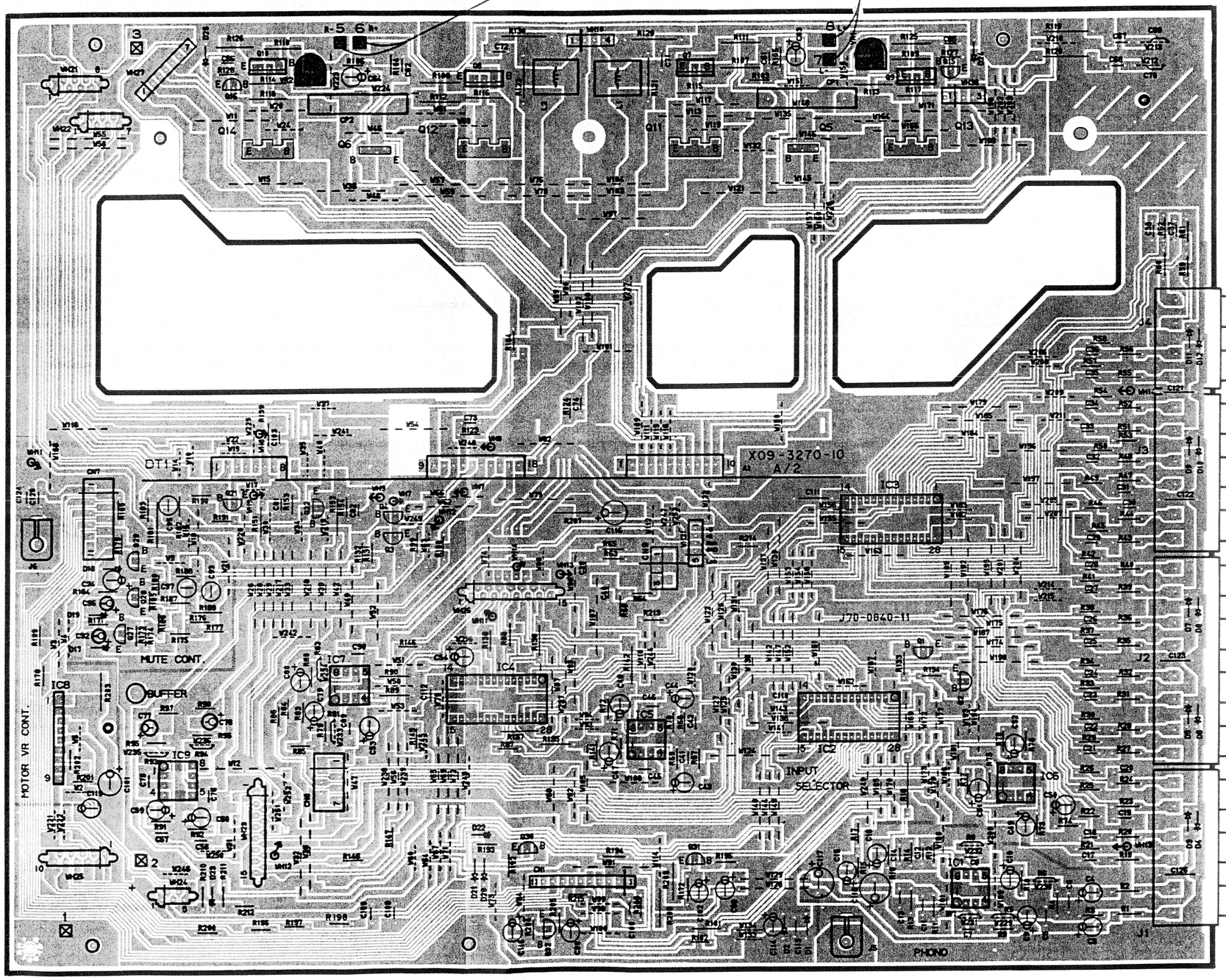
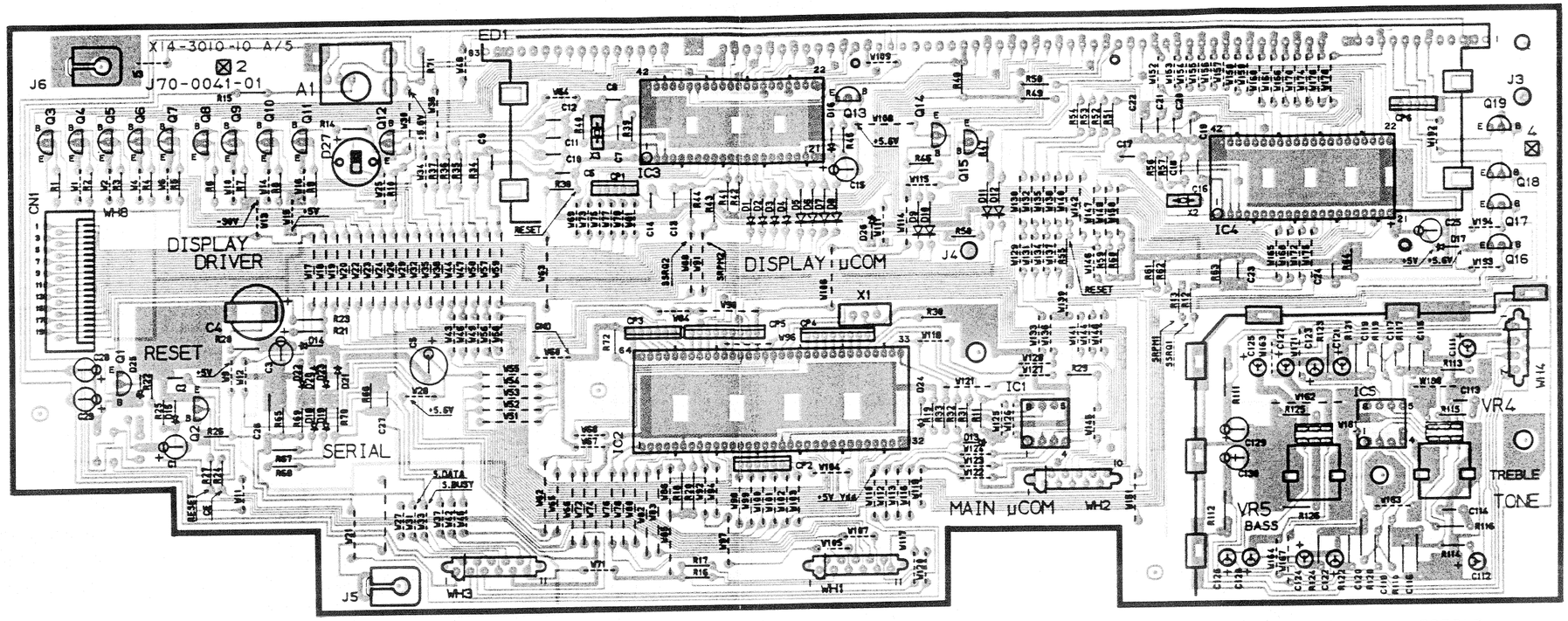
DC voltmeter

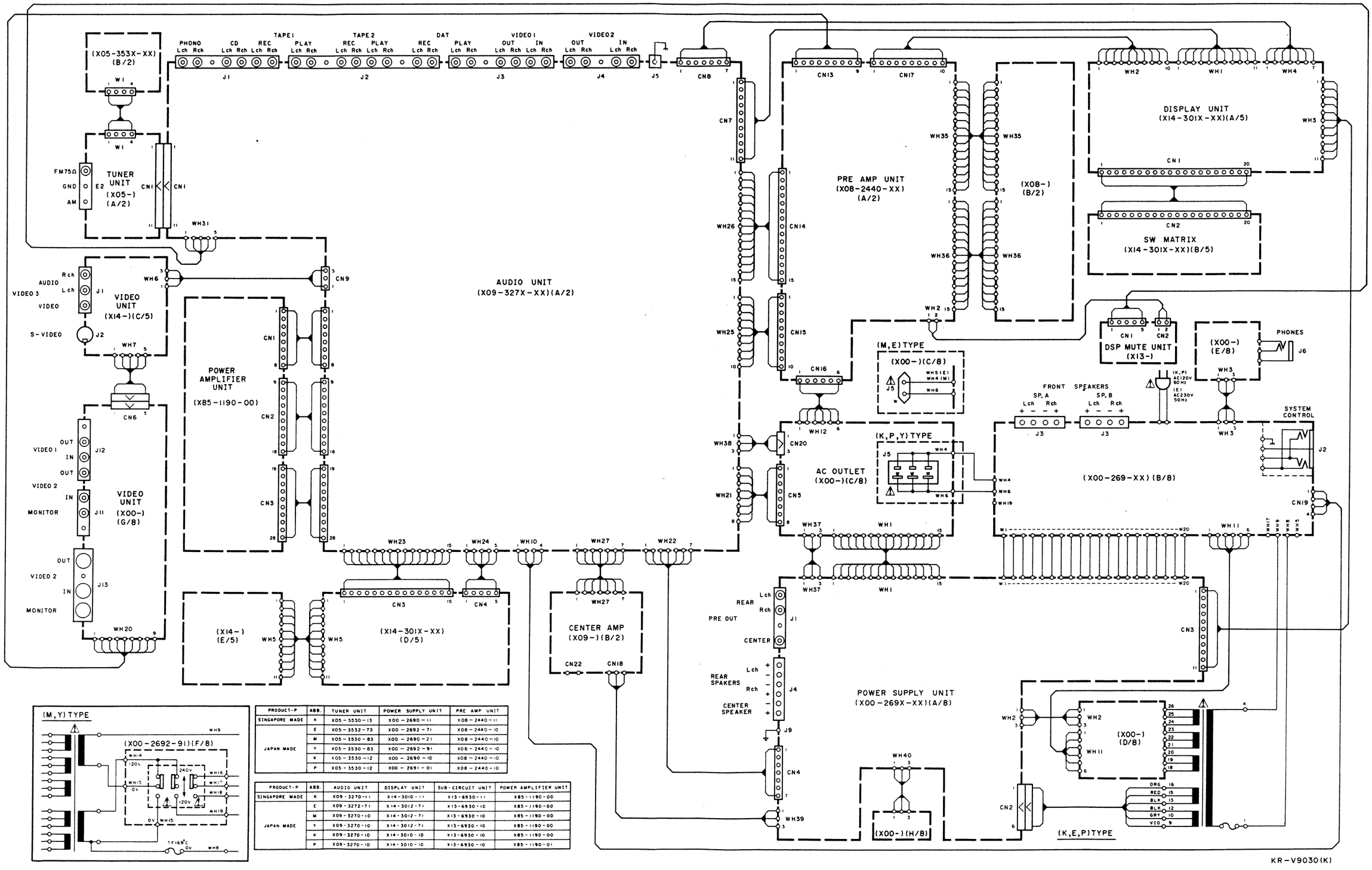


PC BOARD (component side view)



KR-V9030 KR-V9030

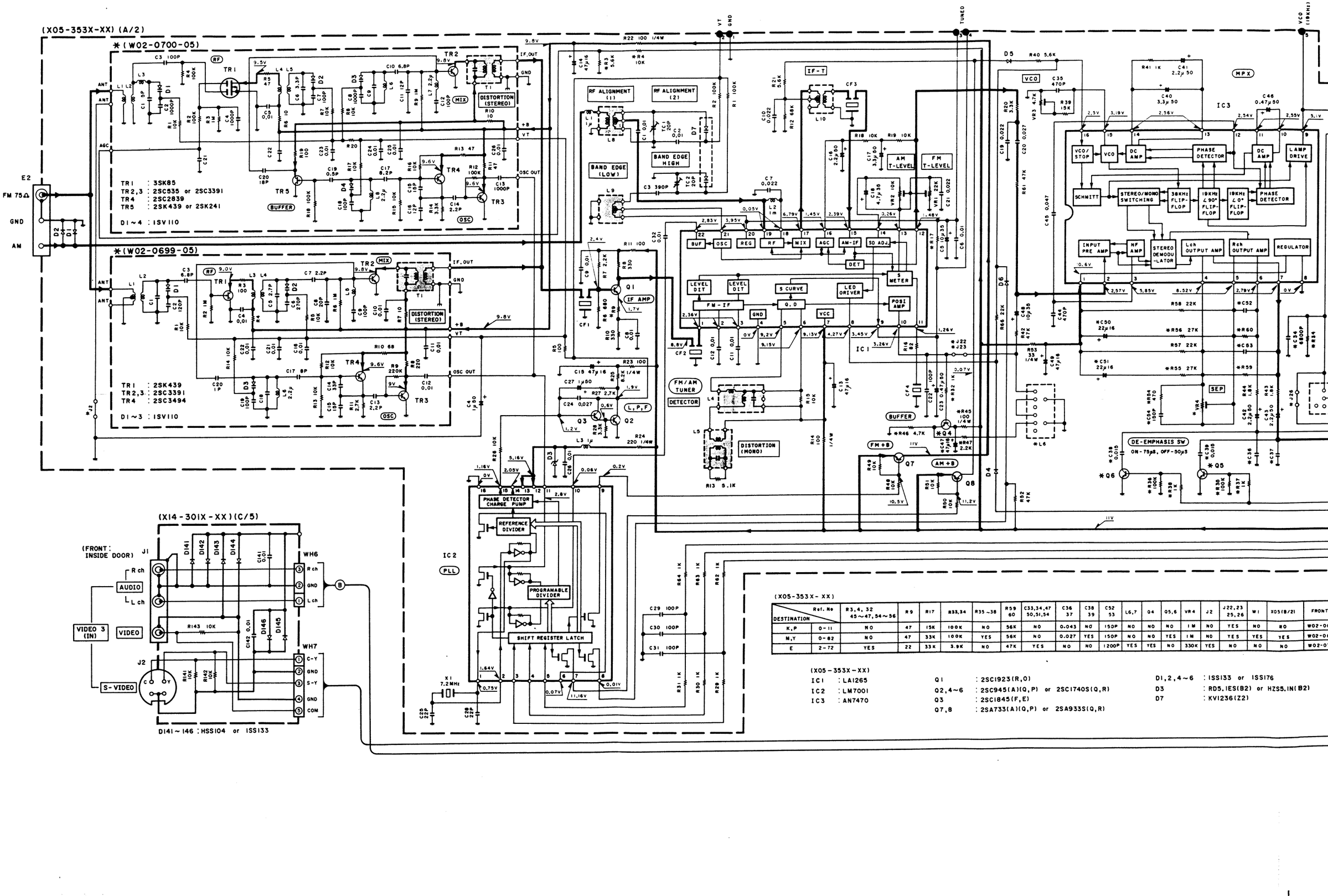
WIRING DIAGRAM



PRODUCT-P	ABB.	TUNER UNIT	POWER SUPPLY UNIT	PRE AMP UNIT
SINGAPORE MADE	K	X05-3530-13	X00-2690-11	X08-2440-11
JAPAN MADE	E	X05-3532-73	X00-2692-71	X08-2440-10
	M	X05-3530-83	X00-2690-21	X08-2440-10
	Y	X05-3530-83	X00-2692-91	X08-2440-10
	K	X05-3530-12	X00-2690-10	X08-2440-10
	P	X05-3530-12	X00-2691-01	X08-2440-10

PRODUCT-P	ABB.	AUDIO UNIT	DISPLAY UNIT	SUB-CIRCUIT UNIT	POWER AMPLIFIER UNIT
SINGAPORE MADE	K	X09-3270-11	X14-3010-11	X13-6930-11	X85-1190-00
JAPAN MADE	E	X09-3272-71	X14-3012-71	X13-6930-10	X85-1190-00
	M	X09-3270-10	X14-3012-71	X13-6930-10	X85-1190-00
	Y	X09-3270-10	X14-3012-71	X13-6930-10	X85-1190-00
	K	X09-3270-10	X14-3010-10	X13-6930-10	X85-1190-00
	P	X09-3270-10	X14-3010-10	X13-6930-10	X85-1190-01

KR-V9030(K)



(X05-353X-XX)

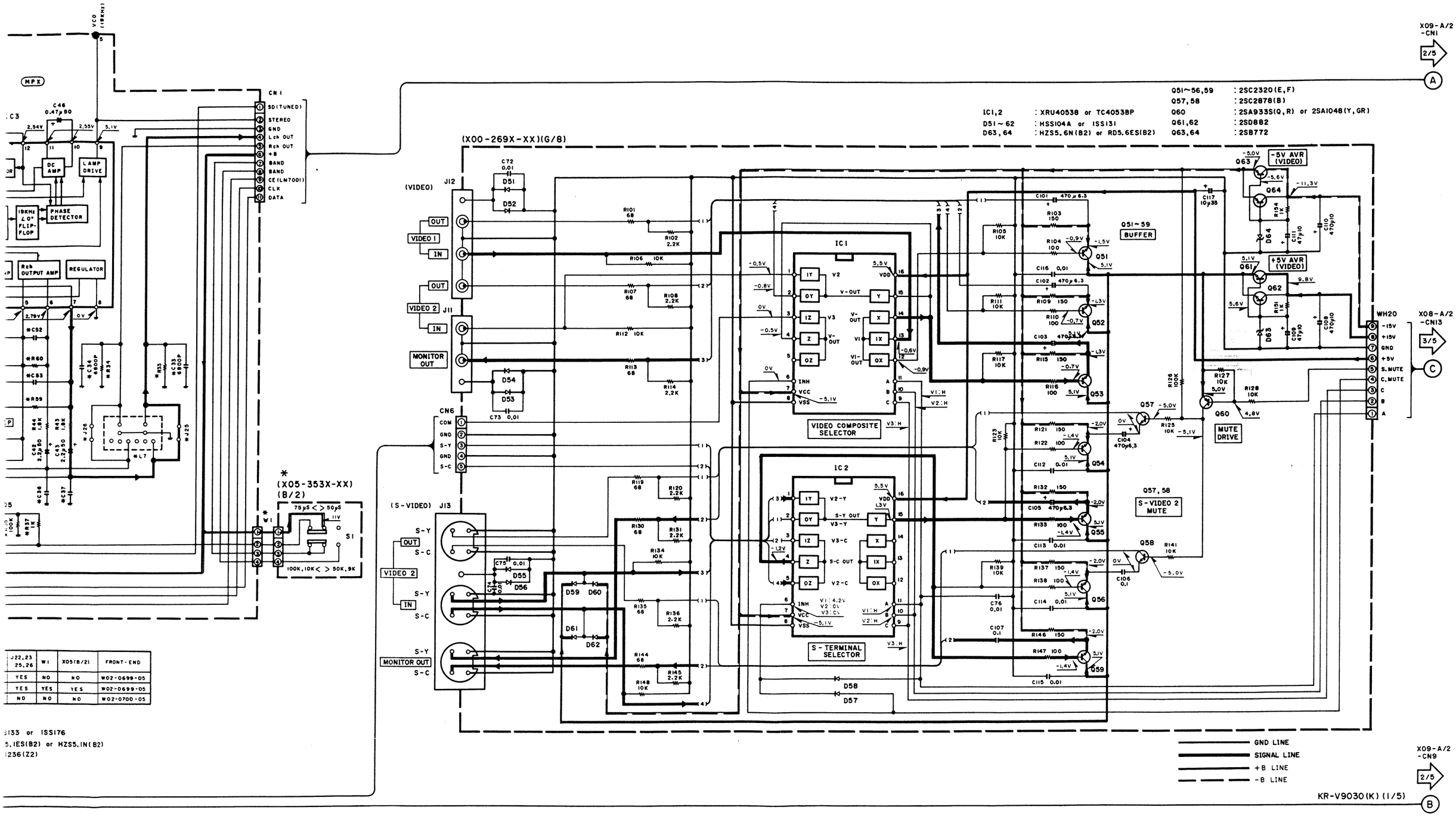
DESTINATION \ Ref. No		R3,4,32 45~47,54~56	R9	R17	R33,34	R35~38	R59 60	C33,34,47 50,51,54	C36 37	C38 39	C52 53	L6,7	Q4	Q5,6	VR4	J2	J22,23 25,26	W1	X05(B/2)	FRONT
K,P	0-11	NO	47	15K	100K	NO	56K	NO	0.043	NO	150P	NO	NO	NO	1M	NO	YES	NO	NO	W02-06
M,Y	0-82	NO	47	33K	100K	YES	56K	NO	0.027	YES	150P	NO	NO	YES	1M	NO	YES	YES	YES	W02-04
E	2-72	YES	22	33K	3.9K	NO	47K	YES	NO	NO	1200P	YES	YES	NO	330K	YES	NO	NO	NO	W02-07

(X05-353X-XX)

IC1 : LA1265
IC2 : LM7001
IC3 : AN7470

Q1 : 2SC1923(R,O)
Q2,4~6 : 2SC945(A)(Q,P) or 2SC1740S(Q,R)
Q3 : 2SC1845(F,E)
Q7,8 : 2SA733(A)(Q,P) or 2SA933S(Q,R)

D1,2,4~6 : 1SS133 or 1SS176
D3 : RD5.1ES(B2) or HZS5.1N(B2)
D7 : KV1236(Z2)



J22,23 25,26	W1	X05(B/2)	FRONT-END
YES	NO	NO	W02-0699-05
YES	YES	YES	W02-0699-05
NO	NO	NO	W02-0700-05

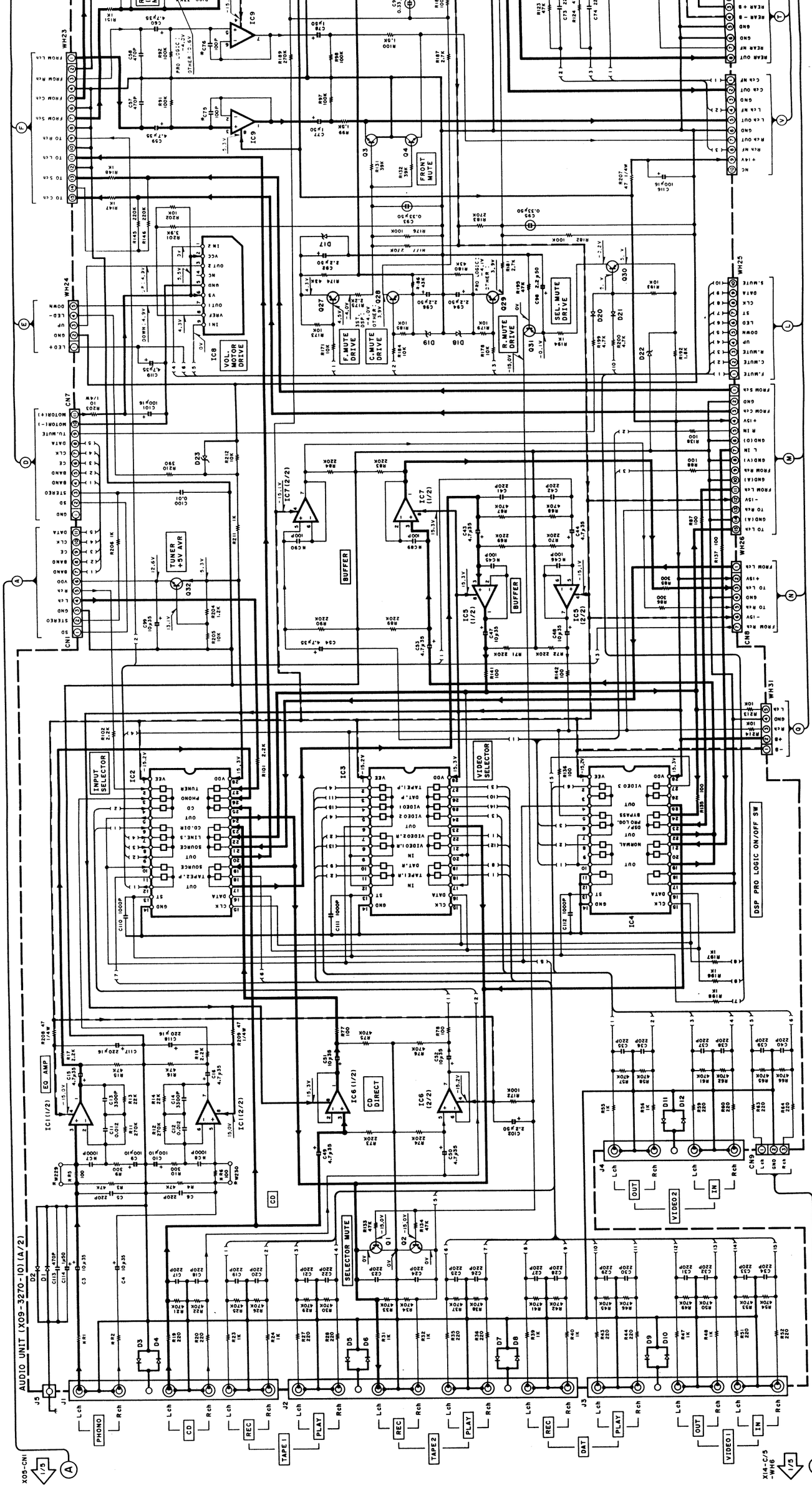
S133 or 1SS176
5,1ES(B2) or HZS5.1N(B2)
1236(Z2)

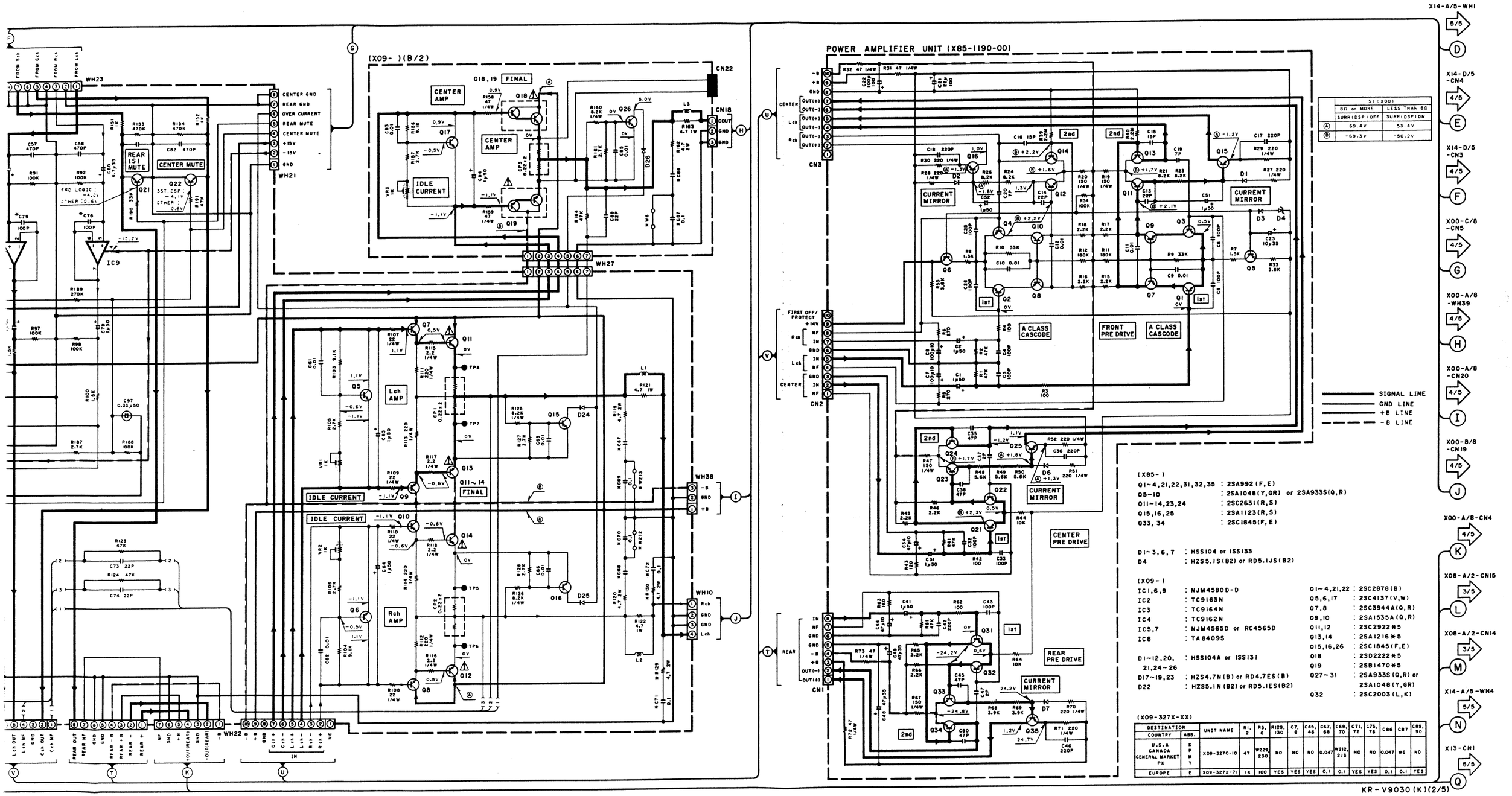
DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

CAUTION: For continued safety, replace safety critical components only with manufacture's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

Y05-2510-10

KR-V9030
KENWOOD


AUDIO UNIT (X09-3270-10) (A/2)
PHONO
CD
TAPE 1
TAPE2
DAT
VIDEO 1
VIDEO 2
INPUT SELECTOR
VIDEO SELECTOR
EQ AMP
CD DIRECT
SELECTOR MUTE
BUFFER
VOL. MOTOR DRIVE
F.MUTE DRIVE
C.MUTE DRIVE
R.MUTE DRIVE
SEL. MUTE DRIVE
FRONT MUTE
TUNER +5V AVR
DSP PRO LOGIC ON/OFF SW
X05-CN1
X14-C/5 -WH6



SI (X001)	
8Ω or MORE	LESS THAN 8Ω
SURR(DSP) OFF	SURR(DSP)ON
Ⓐ 69.4V	53.4V
Ⓑ -69.3V	-50.2V

(X85-)

Q1~4,21,22,31,32,35	: 2SA992(F,E)
Q5~10	: 2SA1048(Y,GR) or 2SA933S(Q,R)
Q11~14,23,24	: 2SC2631(R,S)
Q15,16,25	: 2SA1123(R,S)
Q33, 34	: 2SC1845(F,E)
D1~3,6,7	: HSS104 or ISS133
D4	: HZS5.1S(B2) or RD5.1JS(B2)

(X09-)

IC1,6,9	: NJM4580D-D	Q1~4,21,22	: 2SC2878(B)
IC2	: TC9163N	Q5,6,17	: 2SC4137(V,W)
IC3	: TC9164N	Q7,8	: 2SC3944A(Q,R)
IC4	: TC9162N	Q9,10	: 2SA1535A(Q,R)
IC5,7	: NJM4565D or RC4565D	Q11,12	: 2SC2922※5
IC8	: TA8409S	Q13,14	: 2SA1216※5
		Q15,16,26	: 2SC1845(F,E)
D1~12,20, 21,24~26	: HSS104A or ISS131	Q18	: 2SD2222※5
D17~19,23	: HZS4.7N(B) or RD4.7ES(B)	Q19	: 2SB1470※5
D22	: HZS5.1N(B2) or RD5.1ES(B2)	Q27~31	: 2SA933S(Q,R) or 2SA1048(Y,GR)
		Q32	: 2SC2003(L,K)

(X09-327X-XX)

DESTINATION		UNIT NAME	R1, 2	R5, 6	R129, 130	C7, 8	C45, 46	C67, 68	C69, 70	C71, 72	C75, 76	C86	C87	C88, 90
COUNTRY	ABB.													
U.S.A CANADA GENERAL MARKET PX	K P M Y	X09-3270-10	47	W229, 230	NO	NO	NO	0.047	W212, 213	NO	NO	0.047	W6	NO
EUROPE	E	X09-3272-71	1K	100	YES	YES	YES	0.1	0.1	YES	YES	0.1	0.1	YES

KR-V9030(K)(2/5)

DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or and units.

CAUTION: For continued safety, replace safety critical components only with manufacture's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

Y05-2510-10

KR-V9030
KENWOOD

PRE AMPLIFIER UNIT (X08-2440-10) (A/2)

X00-G/8 -WH20 1/5 C
X09-A/2 -WH25 2/5 L
X09-A/2 -WH26 2/5 M

CN14
S OUT
GND (V)
C OUT
+15V
R OUT
GND (D)
L OUT
GND (V)
R OUT (DSP)
GND (A)
L OUT (DSP)
-15V
R IN
GND (A)
L IN

+5V AVR (μ-COM, DSP)
IC1
Q3
Q4
BUFFER
IC4
IC5 (1/2)
IC5 (2/2)
IC6 (1/2)
IC6 (2/2)
INPUT LEVEL (ELEC. VOL.)
D1
D2
D12
D13
J3

IC13 (1/2)
NORMAL (L)
NORMAL (R)
FRONT (R)
FRONT (L)
IC14 (1/2)
IC13 (2/2)
IC14 (2/2)
DOLBY B NR
IC9
LPF (DAC)
IC7 (1/2)
IC7 (2/2)
IC8 (1/2)
IC8 (2/2)
D3
D4

IC11 (2/2)
CENTER
BUFFER
REAR
IC12 (2/2)
IC10
IC11 (1/2)
IC12 (1/2)
CENTER REAR BALANCE (ELEC. VOL.)

SYSTEM CONTROL μ-COM
IC31
CP3 100K x 9
CP1 100K x 4
CP4 100K x 14
CP2 100K x 15
X1 12MHz
R84 68 2W
R83 68 2W
R81 47 2W
R80 47 2W
R82 2.2K
R116 100

CN17
+5.6V
GND(D)
CLK
DATA
P-OUT
REDY
START
REQ
DSP RESET
OVER LEVEL

CN15
MUTS
DATA
CLK
ST
LED
DOWN
UP
MUTR
MUTC
MUTF

CN16
POWER1
RLYA
RLYB
RLYHP
RLYSC
PROTECT

CN13
-15V
+15V
GND (V)
+5.6V
MUTVS
MUTVC
C
B
A

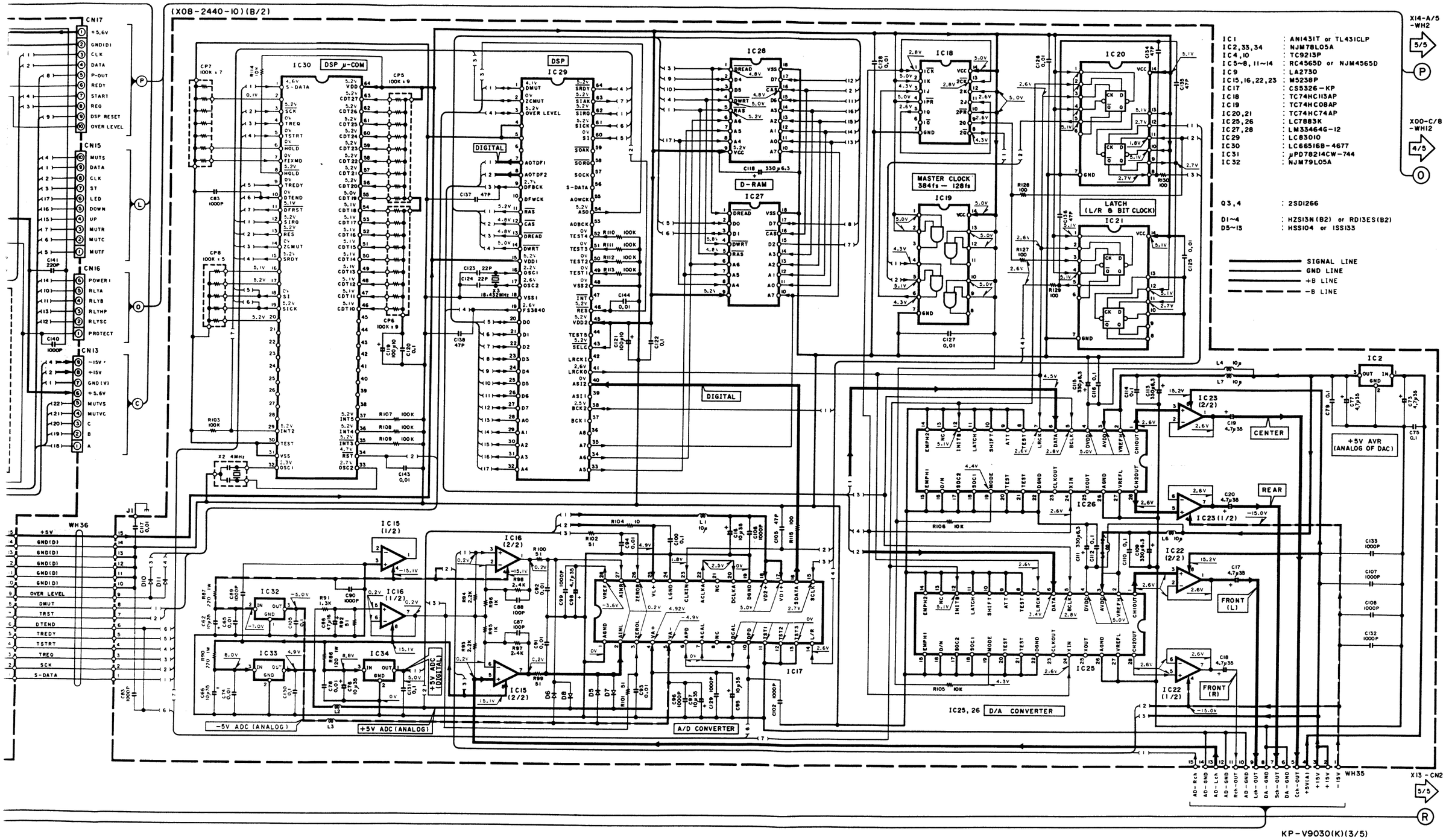
WH36
+5V
GND(D)
GND(D)
GND(D)
GND(D)
GND(D)
OVER LEVEL
DMUT
TRST
DTEND
TREDY
TSTRT
TREQ
SCK
S-DATA

CN1
Reh
GND
Leh
Seh
Ceh

WH35
-15V
+15V
+5V
+5V (A)
Ceh-IN
DA-GND
Seh-IN
DA-GND
Leh-IN
AD-GND
Reh-IN
AD-GND
AD-Leh
AD-GND
AD-Reh

WH2
DMUT IN
DMUT OUT

MEASUREMENT CONDITION PRO LOGIC



DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

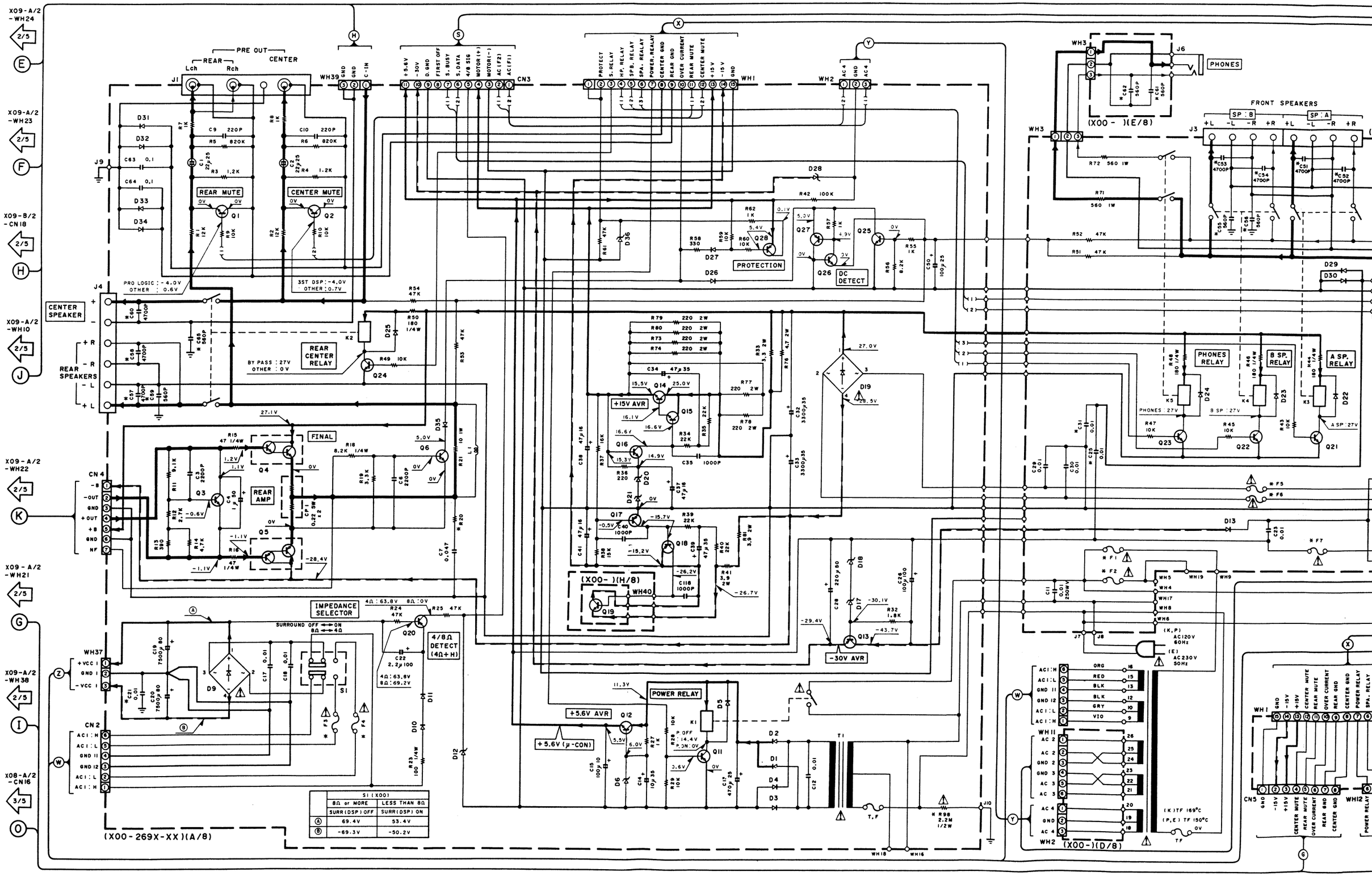
CAUTION: For continued safety, replace safety critical components only with manufacture's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

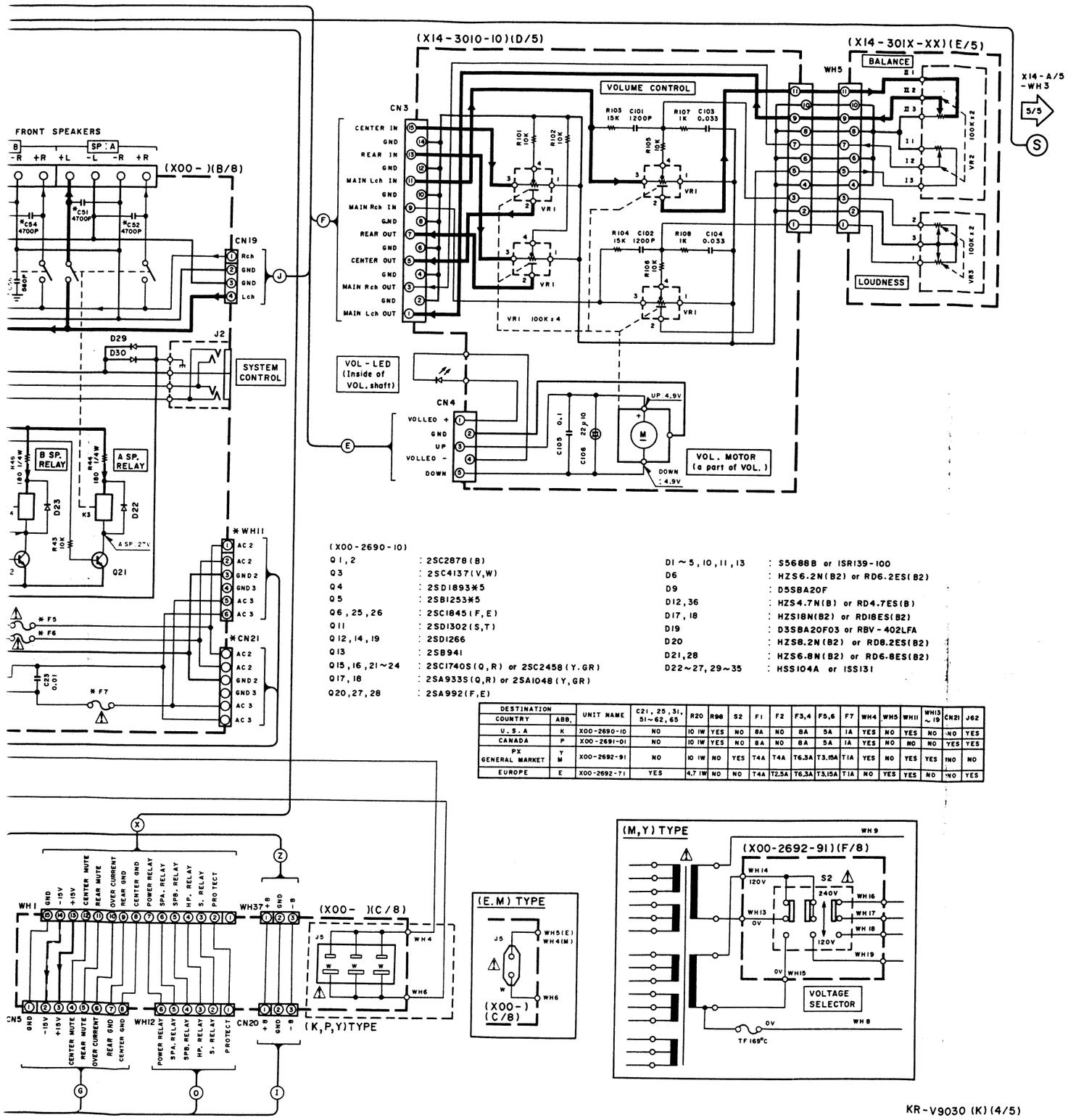
KP-V9030(K)(3/5)

Y05-2510-10

KR-V9030

KENWOOD


PRE OUT
REAR
CENTER
Lch
Rch
J1
WH39
CN3
WH1
WH2
WH3
J6
PHONES
FRONT SPEAKERS
SP : B
SP : A
J3
(X00 -)(E/8)
R72 560 1W
R71 560 1W
R52 47K
R51 47K
REAR MUTE
CENTER MUTE
Q1
Q2
PROTECTION
Q28
Q27
Q25
Q26
DC DETECT
D28
D29
D30
PRO LOGIC : -4.0V
OTHER : 0.6V
3ST DSP : -4.0V
OTHER : 0.7V
CENTER SPEAKER
REAR SPEAKERS
J4
REAR CENTER RELAY
Q24
BY PASS : 27V
OTHER : 0V
K2
D25
R49 10K
R50 180 1/4W
R54 47K
R53 47K
FINAL
REAR AMP
Q4
Q5
Q6
R15 47 1/4W
R16 47 1/4W
R18 8.2K 1/4W
R19 3.3K
R21 10 1W
CP1 0.22 5W ±2
*R20
C7 0.047
L1
CN4
CN2
+15V AVR
Q14
Q15
Q16
Q17
Q18
Q19
D20
D21
(X00-)(H/8)
WH40
-30V AVR
Q13
D17
D18
-30.1V
-43.7V
-29.4V
R32 1.8K
POWER RELAY
+5.6V AVR
+5.6V (μ-CON)
Q12
Q11
K1
D1
D2
D3
D4
D5
D6
T1
T,F
K R98 2.2M 1/2W
J10
27.0V
D19
-28.5V
PHONES RELAY
B SP. RELAY
A SP. RELAY
Q23
Q22
Q21
PHONES : 27V
B SP : 27V
A SP : 27V
K5
K4
K3
D24
D23
D22
R47 10K
R45 10K
R43 10K
R46 180 1/4W
IMPEDANCE SELECTOR
SURROUND OFF ⟷ ON
8Ω ⟷ 4Ω
4Ω : 63.8V 8Ω : 0V
4Ω : 63.8V
8Ω : 69.2V
4/8Ω DETECT (4Ω+H)
Q20
R24 47K
R25 47K
D9
D10
D11
D12
S1
* F3
* F4
SI (X00)
8Ω or MORE
LESS THAN 8Ω
SURR(DSP) OFF
SURR(DSP) ON
Ⓐ 69.4V 53.4V
Ⓑ -69.3V -50.2V
(X00-269X-XX)(A/8)
* F5
* F6
* F7
* F1
* F2
WH5
WH19
WH9
WH4
WH17
WH8
WH6
J7
J8
(K,P) AC120V 60Hz
(E) AC230V 50Hz
WH37
WH38
WH10
WH22
WH23
WH24
WH21
WH18
WH16
WH12
CN5
WH11
(X00-)(D/8)
(K)TF 169°C
(P,E) TF 150°C
TF
X09-A/2 -WH24
X09-A/2 -WH23
X09-B/2 -CN18
X09-A/2 -WH10
X09-A/2 -WH22
X09-A/2 -WH21
X09-A/2 -WH38
X08-A/2 -CN16



(X00-2690-10)

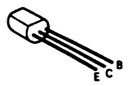
Q1,2	: 2SC2878(B)
Q3	: 2SC4137(V,W)
Q4	: 2SD1893*5
Q5	: 2SB1253*5
Q6,25,26	: 2SC1845(F,E)
Q11	: 2SD1302(S,T)
Q12,14,19	: 2SD1266
Q13	: 2SB941
Q15,16,21~24	: 2SC1740S(Q,R) or 2SC2458(Y.GR)
Q17,18	: 2SA933S(Q,R) or 2SA1048(Y,GR)
Q20,27,28	: 2SA992(F,E)

D1~5,10,11,13	: S5688B or ISR139-100
D6	: HZS6.2N(B2) or RD6.2ES(B2)
D9	: D5SBA20F
D12,36	: HZS4.7N(B) or RD4.7ES(B)
D17,18	: HZS18N(B2) or RD18ES(B2)
D19	: D3SBA20F03 or RBV-402LFA
D20	: HZS8.2N(B2) or RD8.2ES(B2)
D21,28	: HZS6.8N(B2) or RD6.8ES(B2)
D22~27,29~35	: HSS104A or ISS131

DESTINATION		UNIT NAME	C21,25,31,51~62,65	R20	R98	S2	F1	F2	F3,4	F5,6	F7	WH4	WH5	WH11	WH13~19	CN21	J62
COUNTRY	ABB.																
U.S.A	K	X00-2690-10	NO	10 1W	YES	NO	8A	NO	8A	5A	1A	YES	NO	YES	NO	NO	YES
CANADA	P	X00-2691-01	NO	10 1W	YES	NO	8A	NO	8A	5A	1A	YES	NO	NO	NO	YES	YES
PX GENERAL MARKET	Y M	X00-2692-91	NO	10 1W	NO	YES	T4A	T4A	T6.3A	T3.15A	T1A	YES	NO	YES	YES	NO	NO
EUROPE	E	X00-2692-71	YES	4.7 1W	NO	NO	T4A	T2.5A	T6.3A	T3.15A	T1A	NO	YES	YES	NO	NO	YES

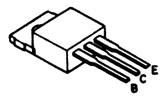
KR-V9030 (K)(4/5)

2SA1123 2SC2320
2SA733 (A) 2SC2631
2SA992 2SC2878
2SC1845 2SC945 (A)
2SC1923 2SD1302
2SC2003



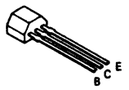
2SB772
2SD882

2SD1266

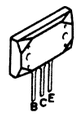


2SB1253*5

DTA124ES 2SA933S
RN2203 2SC1740S
2SA1048 2SC2458

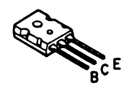


2SA1216*5
2SC2922*5

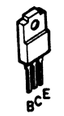


2SC4137

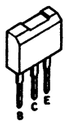
2SB1470*5
2SD2222*5



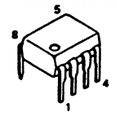
2SA1535A
2SB941
2SC3944A



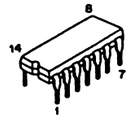
2SD1893*5



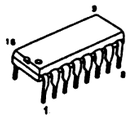
NJM4565D
NJM4565D-A
NJM4565D-D



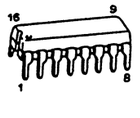
TC74HC74AP



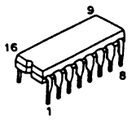
LA2730



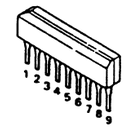
LM7001



AN7470
TC4053BP
TC9213P

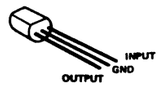


TA8409S



M5238P
RC4565D
RC4565D-D

AN1431T
NJM78L05A



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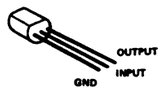
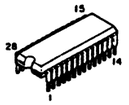
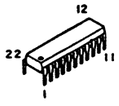


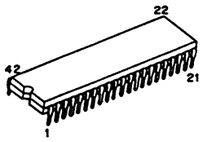
TC9162N
TC9163N
TC9164N



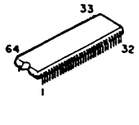
LA1265



μPD7537ACU-220



μPD75116CW-179



DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

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Y05-2510-10

KR-V9030
KENWOOD

(X14-301X-XX)(B/5)

INPUT LEVEL- | DSP | 3 STEREO | PRO LOGIC | BY PASS | SP B | SP A | POWER | DAT | TAPE 2 | DIRECT | VIDEO 1

S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S33 | S34 | S35 | S36

5 | +10 | TUNE + | TUNE - | BAND | CD DIRECT | LINE STRAIGHT | INPUT LEVEL + | REAR LEVEL+ | CENTER LEVEL+ | VISUAL FIX | MEMORY

S9 | S10 | S11 | S12 | S13 | S14 | S15 | S16 | S37 | S38 | S39 | S40

7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | D.S.P.S | P.SCAN | REAR LEVEL- | CENTER LEVEL-

S17 | S18 | S19 | S20 | S21 | S22 | S23 | S24 | S41 | S42 | S43 | S44

TAPE 1 | CHARACTER | AUTO | DIGIT | TUNER | PHONO | CD | 6 | CENTER MODE | CHANNEL MODE | VIDEO 2 | VIDEO 3

S25 | S26 | S27 | S28 | S29 | S30 | S31 | S32 | S45 | S46 | S47 | S48

CN2 — KR24 KR23 KR22 KR21 1GA 2GA 3GA 4GA 5GA 6GA 7SA 8GA 4GB 3GB 2GB 1GB KR14 KR13 KR12 KR11 — WH8

R131 10K, R132 10K, R133 10K, R134 10K, R135 10K, R136 10K, R137 10K

DISPLAY UNIT (X14-301X-XX)(A/5)

CN1 — R73 10K, R74 10K, R75 10K, R76 10K, R77 10K, R78 10K, R79 10K, R80 10K, R81 10K, R82 10K, R83 10K, R84 10K, R85 10K

D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12

CP1 100K x 4

A1 REMOTE SENSOR — 5.4V VCC, GND, OUT, 4.8V

IC1 ROM — CS, SCK, SI, SO; VCC 4.8V, R/B, RESET, GND; R11 10K; D13

IC2 μ-COM (MAIN)

0V STEREO, 4.5V SD, 4.8V CE, 3.3V REM, 5.1V K/E, 0V J/OTHER, 5.2V AM WIDE, 0V GND, 0.1V SSRQ1, 4.6V SSRQ2, 4.8V P9, 0V P8, 0V MSRQ1, 0V MSRQ2, 5.1V SI, 0V SO, 4.7V SCK, 5.4V SRPM1, P7, P6 0V, P5, P4 5.4V, P3, P2 5.3V, P1, P14 0V, P13 4.8V, P12, P11, P10 5.4V, +5V

GND 4.8V, DATA, CLK, CE, T-MUTE, DSP RESET, REQ, START, RDY, P-OUT, 4Ω/8Ω, DATA, CLK, S BUSY, S DATA, X1, X2, RESET, ROM CE, ROM R/B, DISP RESET, SRPM2

PLL

CP3 10K x 5 — CP2 10K x 5 — CP4 10K x 7 — CP5 10K x 8 1/4W — CP6 10K x 4

R15 1K, R16 10K, R17 10K, R18 100K, R20 10K, R12 1K, R13 1K, R24 1K, R29 10K, R72 10K, R19 10K, R30 10K, R31 10K, R33 10K, R32 10K

4.1943MHz X1

(MEASURED +B ON PRO LOGIC)

Q12, Q19 — 22K, 22K, R10 100K

J6

WH1 — SD, STEREO, BAND, BAND, CE, CLK, DATA, T-MUTE, MOTOR (-), MOTOR (+)

WH2 — +5.6V, GND, CLK, DATA, P-OUT, RDY, START, REQ, DSP RESET, OVER LEVEL

R86 1K, R87 1K, R88 1K, R89 1K, R90 1K, R91 1K, R92 1K

WH3 — AC(F1), AC(F2), MOTOR (-), MOTOR (+), 4Ω/8Ω, S DATA, S BUSY, FIRST OFF, GND, -30V, +5.6V

STAND BY, RESET, CE

R14 560, R21 220, R23 100, R26 100K, R27 1K, R22 3.3K, R25 100K, R28 330, C1 1μ50, C2 0.022, C3 100μ10, C4 0.047 5.6, C5 100μ10

Q1, Q2

D14, D15, D18, D19, D20, D21, D22, D23, D24, D25, D27

R67 330, R68 330, R69 100K, R70 100K, R65 100K, R66 100K, C26 220P, C27 220P

X09-A/2 -CN8 (2/5) — WH4: L OUT, +15V, L IN, GND, R IN, -15V, R OUT

R111 220 1/4W, R112 220 1/4W, R113 1.2K, R114 1.2K, R115 470, R116 470, R117 220K, R118 220K, C111 1μ50, C112 1μ50, C113 0.047, C114 0.047, C115 220P, C116 220P, C117 220P, C118 220P, C119 47P, C120 47P, C121 1.5K, C122 1μ50, C123 1μ50, C124 1μ50, C125 1μ50, C126 10μ16, C127 10μ16, C128 10μ16, C129 22μ16, C130 22μ16, R119 1.5K, R120 1.5K, R121 1.5K, R122 1.5K, R123 1.5K, R124 1.5K, R125 330, R126 330, VR4 100K x 2, VR5 100K x 2, R1, R2

TREBLE, TONE, BASS

IC5 (1/2) — 14.0V, -14.0V

IC5 (2/2)

X08-A/2 -WH2 (3/5)

X09-A/2 -WH31 (2/5)

X09-A/2 -CN7 (2/5)

X08-A/2 -CN17 (3/5)

X00-A/8 -CN3 (4/5)

(X13-6930-10)

IC1,2 : NJM4665D-A

Q1 : 2SC2878

D1~5,8,9 : 1SS133 or HSS104

D6,7 : HZS6.8N(B2) or RD6.8ES(B2)

CN2 — DMUT OUT, DMUT IN

CN1 — -B, +B, R ch, GND, L ch

R22 1K, R16 390 1/4W, R17 390 1/4W, R12 390, R13 100K, R11 1K, R10 9.1K, R9 20K, R6 20K, R5 20K, R8 10K, R4 20K, R7 10K, R3 330K, R14 35K, R15 35K, R19 1K, R21 10K, C1 4.7μ35, C2 4.7μ35, C3 4.7μ35, C4 4.7μ16, C5 22μ10, C6 22μ16, C7 22μ16, D1 D2 D3 D4 D5 D6 D7 D8 D9, Q1

COMMUTATION — IC1 (2/2) — IC2 (2/2)

LEVEL AMP — IC1 (1/2)

MUTE DRIVE — COMPARATOR — L.P.F.

IC1 : XRM9021A
IC2 : μPD75116CW-179
IC3,4 : μPD7537ACU-220
IC5 : RC4565D or NJM4565D-D

Q1 : 2SA933S(Q,R) or 2SA1048(Y,GR)
Q2,13~15 : 2SC1740S(Q,R) or 2SC2458(Y,GR)
Q3~12,16~19 : DTA124ES or RN2203

D1~24 : HSS104 or 1SS133
D25 : RD3.9ES(B2) or HZS3.9N(B2)
D26 : RD4.7ES(B) or HZS4.7N(B)

ED1 : 16-MT-29GK

AI : W02-0975-05

SIGNAL LINE
GND LINE
+B LINE
-B LINE

PRODUCT. P.	DESTINATION		UNIT NAME	W85	W86
	COUNTRY	ABB.			
SINGAPORE MADE	U.S.A.	K	X14-3010-10	NO	YES
	CANADA	P			
	GENERAL MARKET	M	X14-3012-71	YES	NO
	PX	Y			
	EUROPE	E			
JAPAN MADE	U.S.A.	K	X14-3010-11	NO	YES

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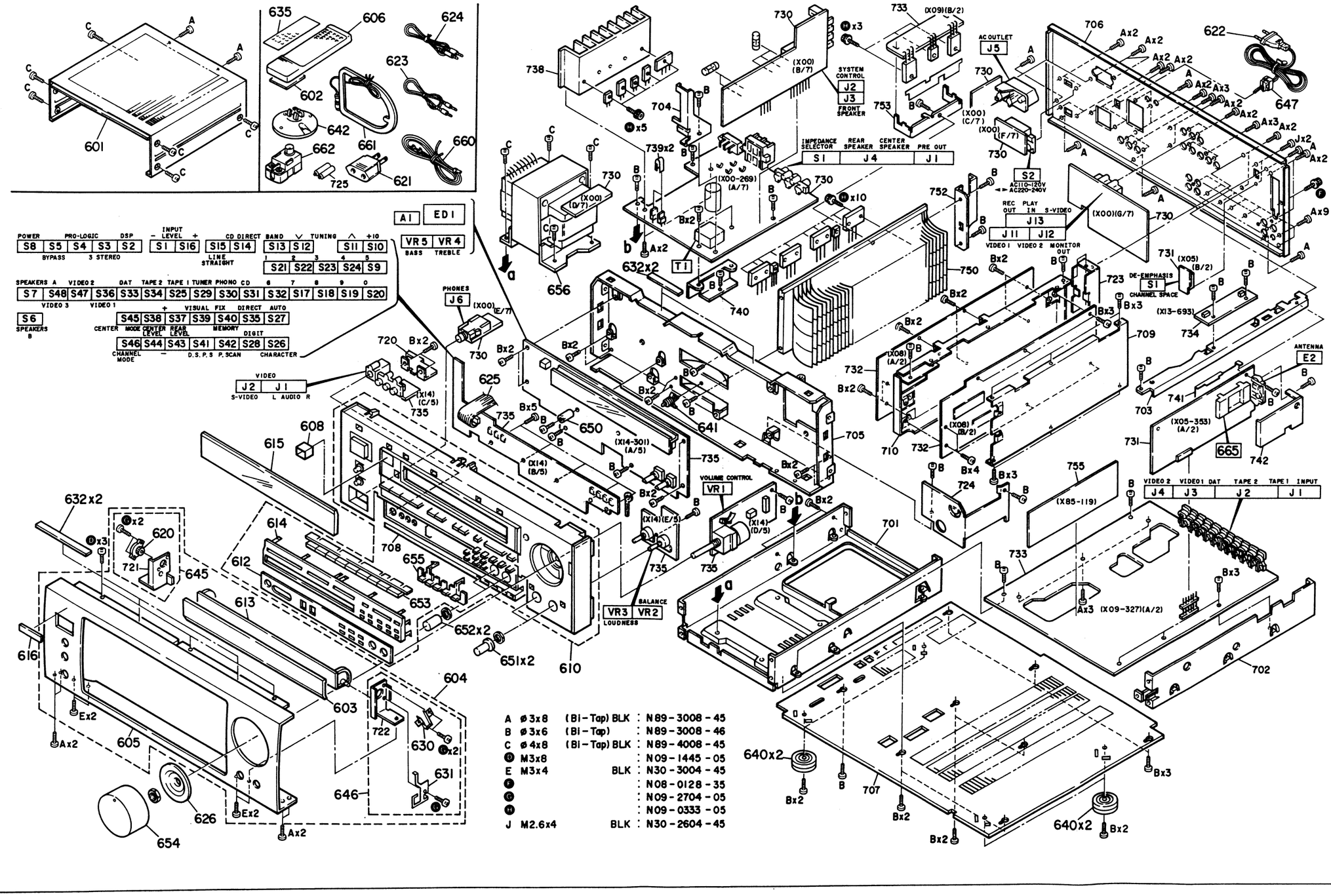
KR-V9030(K)(5/5)

Y05-2510-10

KR-V9030
KENWOOD

EXPLODED VIEW

EXPLODED VIEW



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No.1

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
KR-V9030 (SIGAPORE MADE)						
601	1A	*	A01-1806-21	METALLIC CABINET		
602	1A		A09-0088-08	BATTERY COVER (A70-0506-05)	E	
602	1A		A09-0111-08	BATTERY COVER (A70-0504-05)	KPMY	
603	3B	*	A29-0182-02	PANEL		
604	3B	*	A60-0005-21	PANEL ASSY		
605	3A	*	A60-0006-12	PANEL		
606	1B	*	A70-0504-05	REMOTE CONTROLLER ASSY	KPMY	
606	1B	*	A70-0506-05	REMOTE CONTROLLER ASSY	E	
608	2A	*	A33-0120-04	REFLECTOR		
610	3B	*	B01-0474-32	PANEL ESCUTCHEON ASSY		
612	2A	*	B03-2684-03	DRESSING PLATE		
613	3A	*	B07-1972-02	ESCUTCHEON		
614	2A	*	B07-1973-12	ESCUTCHEON		
615	2A	*	B10-1837-13	FRONT GLASS		
616	3A		B43-0287-04	KENWOOD BADGE		
-			B46-0092-03	WARRANTY CARD	K	
-			B46-0094-03	WARRANTY CARD	Y	
-			B46-0095-03	WARRANTY CARD	Y	
-			B46-0121-03	WARRANTY CARD	P	
-			B46-0122-13	WARRANTY CARD	E	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-		*	B60-0312-00	INSTRUCTION MANUAL(ENGLISH)	KPMY	
-		*	B60-0313-00	INSTRUCTION MANUAL(FRENCH)	P	
-		*	B60-0358-00	INSTRUCTION MANUAL(S,C)	M	
-		*	B60-0359-10	INSTRUCTION MANUAL(F,G,D)	E	
620	2A		D39-0200-05	DAMPER		
⚠ 621	1B		E03-0115-05	AC PLUG ADAPTER	M	
⚠ 622	1D		E30-0459-05	AC POWER CORD	ME	
⚠ 622	1D		E30-0812-05	AC POWER CORD	Y	
⚠ 622	1D		E30-2209-05	AC POWER CORD	KP	
623	1B		E30-0977-05	CORD WITH PLUG	E	
624	1B		E30-1392-05	CORD WITH PLUG	E	
625	2B	*	E35-0111-05	WIRING HARNESS		
626	3A	*	F10-0805-04	SHIELDING PLATE		
630	3B	*	G02-0981-04	FLAT SPRING		
631	3B	*	G02-0982-14	FLAT SPRING		
632	2A,2B	*	G10-0148-04	NON-WOVEN FABRIC		
635	1A		G16-0772-08	WRITING SHEET (A70-0504-05)	KPMY	
-		*	H10-5082-02	POLYSTYRENE FOAMED FIXTURE(L)		
-		*	H10-5083-02	POLYSTYRENE FOAMED FIXTURE(R)		
-		*	H11-0033-04	POLYSTYRENE FOAMED BOARD		
-		*	H12-2099-04	PACKING FIXTURE		
-			H25-0225-04	PROTECTION BAG (850X450X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
-		*	H50-0004-04	ITEM CARTON CASE	KPMY	
-		*	H50-0005-04	ITEM CARTON CASE	E	
640	3C,3D		J02-1002-05	FOOT		
641	2C		J19-0506-05	UNIT HOLDER		
642	1B		J19-2815-04	ANTENNA HOLDER		
645	2A	*	J21-5683-14	MOUNTING HARDWARE ASSY		

E: Scandinavia & Europe K: USA P: Canada
Y: PX(Far East, Hawaii) T: England M: Other Aeas
Y: AAFES (Europe) X: Australia

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No.2

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
646	3B	*	J21-5685-14	MOUNTING HARDWARE ASSY		
⚠ 647	1D		J42-0083-05	POWER CORD BUSHING		
650	2B	*	J39-0161-04	SPACER		
-			J61-0307-05	WIRE BAND		
651	3B		K29-3632-04	KNOB (LOUDNESS,BALANCE)		
652	3B		K29-3663-04	KNOB (BASS,TREBLE)		
653	3B	*	K29-4095-12	KNOB (INPUT SELECTOR)		
654	3A	*	K29-4097-04	KNOB ASSY (VOLUME CONTROL)		
655	2B	*	K29-4101-23	KNOB (10 KEY)		
⚠ 656	2B		L01-8621-05	POWER TRANSFORMER	K	
⚠ 656	2B		L01-8625-05	POWER TRANSFORMER	MY	
⚠ 656	2B		L01-8627-05	POWER TRANSFORMER	P	
⚠ 656	2B	*	L07-0275-05	POWER TRANSFORMER	E	
A			N89-3008-45	BINDING HEAD TAPTITE SCREW		
B			N89-3008-46	BINDING HEAD TAPTITE SCREW		
C			N89-4008-45	BINDING HEAD TAPTITE SCREW		
D			N09-1445-05	SET SCREW (M3X8)		
E			N30-3004-45	PAN HEAD MACHIN SCREW		
F			N08-0128-35	BINDING POST		
G			N09-2704-05	TAPTITE SCREW		
J			N30-2604-45	PAN HEAD MACHIN SCREW	MY	
660	1B		T90-0121-05	T TYPE ANTENNA		
661	1B		T90-0174-05	LOOP ANTENNA		
662	1B		T90-0177-05	ANTENNA ADAPTOR		
KR-V9030 (JAPAN MADE)						
601	1A	*	A01-1806-21	METALLIC CABINET		
602	1A		A09-0111-08	BATTERY COVER (A70-0504-05)		
603	3B	*	A29-0182-02	PANEL		
604	3B	*	A60-0005-21	PANEL ASSY		
605	3A	*	A60-0006-12	PANEL		
606	1B	*	A70-0504-05	REMOTE CONTROLLER ASSY		
608	2A	*	A33-0120-04	REFLECTOR		
610	3B	*	B01-0474-32	PANEL ESCUTCHEON ASSY		
612	2A	*	B03-2684-03	DRESSING PLATE		
613	3A	*	B07-1972-02	ESCUTCHEON		
614	2A	*	B07-1973-12	ESCUTCHEON		
615	2A	*	B10-1837-13	FRONT GLASS		
616	3A		B43-0287-04	KENWOOD BADGE		
-			B46-0092-03	WARRANTY CARD		
-		*	B60-0312-00	INSTRUCTION MANUAL(ENGLISH)		
620	2A		D39-0200-05	DAMPER		
⚠ 622	1D		E30-0974-05	AC POWER CORD		
625	2B	*	E35-0111-05	WIRING HARNESS		
626	3A	*	F10-0805-04	SHIELDING PLATE		
630	3B	*	G02-0981-04	FLAT SPRING		
631	3B	*	G02-0982-14	FLAT SPRING		
632	2A,2B	*	G10-0148-04	NON-WOVEN FABRIC		
635	1A		G16-0772-08	WRITING SHEET (A70-0504-05)		
-		*	H10-5149-02	POLYSTYRENE FOAMED FIXTURE(L)		
-		*	H10-5150-02	POLYSTYRENE FOAMED FIXTURE(R)		
-		*	H11-0035-04	POLYSTYRENE FOAMED BOARD		

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No.3

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-		*	H12-2102-04	PACKING FIXTURE		
-			H25-0225-04	PROTECTION BAG (850X450X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
-		*	H50-0088-04	ITEM CARTON CASE		
640	3C,3D		J02-1002-05	FOOT		
641	2C		J19-0506-05	UNIT HOLDER		
642	1B		J19-2815-04	ANTENNA HOLDER		
645	2A	*	J21-5683-14	MOUNTING HARDWARE ASSY		
646	3B	*	J21-5685-14	MOUNTING HARDWARE ASSY		
⚠ 647	1D		J42-0083-05	POWER CORD BUSHING		
650	2B	*	J39-0161-04	SPACER		
-			J61-0307-05	WIRE BAND		
651	3B		K29-3632-04	KNOB (LOUDNESS,BALANCE)		
652	3B		K29-3663-04	KNOB (BASS,TREBLE)		
653	3B	*	K29-4095-12	KNOB (INPUT SELECTOR)		
654	3A	*	K29-4097-04	KNOB ASSY (VOLUME CONTROL)		
655	2B	*	K29-4101-23	KNOB (10 KEY)		
⚠ 656	2B		L01-8621-05	POWER TRANSFORMER		
A			N89-3008-45	BINDING HEAD TAPTITE SCREW		
B			N89-3008-46	BINDING HEAD TAPTITE SCREW		
C			N89-4008-45	BINDING HEAD TAPTITE SCREW		
D			N09-1445-05	SET SCREW (M3X8)		
E			N30-3004-45	PAN HEAD MACHIN SCREW		
F			N08-0128-35	BINDING POST		
G			N09-2704-05	TAPTITE SCREW		
660	1B		T90-0175-05	T TYPE ANTENNA		
661	1B		T90-0173-05	LOOP ANTENNA		
662	1B		T90-0177-05	ANTENNA ADAPTOR		
POWER SUPPLY UNIT (X00-2690-10)						
C1 ,2			C90-1353-05	NP-ELEC 22UF 25WV		
C3			CK45FB1H222K	CERAMIC 2200PF K		
C4			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C6			CK45FB1H222K	CERAMIC 2200PF K		
C7			CF92FV1H473J	MF 0.047UF J		
C9 ,10			CC45FSL1H221J	CERAMIC 220PF J		
⚠ C11			C91-0971-05	FILM 0.01UF 250WV		
C12			CK45FF1H103Z	CERAMIC 0.010UF Z		
C13			CE04LW1E471M	ELECTRO 470UF 25WV		
C14			CE04LW1V100M	ELECTRO 10UF 35WV		
C15			CE04LW1A101M	ELECTRO 100UF 10WV		
C17 ,18			CK45FF1H103Z	CERAMIC 0.010UF Z		
C19 ,20		*	C90-1869-05	ELECTRO 7500UF 80WV		
C21			CK45FF1H103Z	CERAMIC 0.010UF Z	E	
C22			CE04LW2A2R2M	ELECTRO 2.2UF 100WV		
C23			CK45FF1H103Z	CERAMIC 0.010UF Z		
C25			CK45FF1H103Z	CERAMIC 0.010UF Z	E	
C26			CE04LW2A101M	ELECTRO 100UF 100WV		
C28			CE04LW1H221M	ELECTRO 220UF 50WV		
C29 ,30			CK45FF1H103Z	CERAMIC 0.010UF Z		
C31			CK45FF1H103Z	CERAMIC 0.010UF Z	E	
C32 ,33			CE04LW1V332M	ELECTRO 3300UF 35WV		
C34			CE04LW1V470M	ELECTRO 47UF 35WV		
C35			CK45FB1H102K	CERAMIC 1000PF K		

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No.4

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C37 ,38			CE04LW1C470M	ELECTRO 47UF 16WV		
C39			CE04LW1V470M	ELECTRO 47UF 35WV		
C40			CK45FB1H102K	CERAMIC 1000PF K		
C41			CE04LW1C470M	ELECTRO 47UF 16WV		
C50			CE04LW1E101M	ELECTRO 100UF 25WV		
C51 -54			CK45FF1H472Z	CERAMIC 4700PF Z	E	
C55 ,56			CK45FB1H561K	CERAMIC 560PF K	E	
C57 ,58			CF92FV1H472J	MF 4700PF J	E	
C59			CK45FB1H561K	CERAMIC 560PF K	E	
C60			CF92FV1H472J	MF 4700PF J	E	
C61 ,62			CK45FB1H561K	CERAMIC 560PF K	E	
C63 ,64			CK45FF1H103Z	CERAMIC 0.010UF Z	E	
C65			CK45FB1H561K	CERAMIC 560PF K	E	
C72 -75			C91-0769-05	CERAMIC 0.01UF K		
C76			CK45FF1H103Z	CERAMIC 0.010UF Z		
C101-105			CE04LW0J471M	ELECTRO 470UF 6.3WV		
C106,107			CF92FV1H104J	MF 0.10UF J		
C108			CE04LW1A471M	ELECTRO 470UF 10WV		
C109			CE04LW1A470M	ELECTRO 47UF 10WV		
C110			CE04LW1A471M	ELECTRO 470UF 10WV		
C111			CE04LW1A470M	ELECTRO 47UF 10WV		
C112-116			CK45FF1H103Z	CERAMIC 0.010UF Z		
C117			CE04LW1V100M	ELECTRO 10UF 35WV		
C118			CK45FB1H102K	CERAMIC 1000PF K		
J1	1C		E13-0308-05	PHONO JACK (PRE OUT)		
J2	1C		E11-0188-05	MINIATURE PHONE JACK(S.CONT)		
J3	1C		E20-0823-05	LOCK TERMINAL BOARD (F.SP)		
J4	1C	*	E70-0001-05	LOCK TERMINAL BOARD (C,R SP)		
⚠ J5	1C		E03-0108-05	AC OUTLET	ME	
⚠ J5	1C		E03-0111-05	AC OUTLET	KPY	
J6	2B		E11-0189-05	PHONE JACK (PHONES)		
J11	1C		E13-0291-05	PHONO JACK(VIDEO2 IN,MONITOR)		
J12	1C		E13-0318-05	PHONO JACK(VIDEO1 OUT,IN)		
J13	1C		E06-0407-05	CYLINDRICAL RECEPTACLE(VIDEO)		
⚠ F1			F05-4025-05	FUSE (SEMKO) (250V T4A)	MYE	
⚠ F1			F05-8029-05	FUSE (UL) (250V 8A)	KP	
⚠ F2			F05-2525-05	FUSE (SEMKO) (250V T2.5A)	E	
⚠ F2			F05-4025-05	FUSE (SEMKO) (250V T4A)	MY	
⚠ F3 ,4			F05-6321-05	FUSE (SEMKO) (250V T6.3A)	MYE	
⚠ F3 ,4			F05-8029-05	FUSE (UL) (250V 8A)	KP	
⚠ F5 ,6			F04-5022-05	FUSE (UL) (125V 5A UL)	KP	
⚠ F5 ,6			F05-3121-05	FUSE (SEMKO) (250V T3.15A)	MYE	
⚠ F7		*	F04-1026-05	FUSE (UL) (250V 1A)	KP	
⚠ F7			F06-1022-05	FUSE (SEMKO) (250V T1A)	MYE	
CN51,52			J13-0041-05	FUSE CLIP	KP	
CN51,52			J13-0075-05	FUSE CLIP	MYE	
CN53,54			J13-0075-05	FUSE CLIP	MYE	
CN55-58			J13-0041-05	FUSE CLIP	KP	
CN55-58			J13-0075-05	FUSE CLIP	MYE	
CN59-64			J13-0075-05	FUSE CLIP		
J14			J11-0098-05	WIRE CLAMPER		
L1			L39-0085-05	PHASE-COMPENSATION COIL		
⚠ T1	2B		L01-7651-05	POWER TRANSFORMER	KP	
⚠ T1	2B		L01-7653-05	POWER TRANSFORMER	MY	

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No.5

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
⚠ T1	2B		L01-7657-05	POWER TRANSFORMER	E	
A			N89-3008-45	BINDING HEAD TAPTITE SCREW		
B			N89-3008-46	BINDING HEAD TAPTITE SCREW		
H			N09-0333-05	TAPPING SCREW (3X12)		
CP1			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
R15 ,16			RD14NB2E470J	RD 47 J 1/4W		
R18			RD14NB2E822J	RD 8.2K J 1/4W		
R20			RS14KB3A100J	FL-PROOF RS 10 J 1W	KPMY	
R20			RS14KB3A4R7J	FL-PROOF RS 4.7 J 1W	E	
R21			RS14KB3A100J	FL-PROOF RS 10 J 1W		
R23			RD14NB2E101J	RD 100 J 1/4W		
R33			RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W		
R41		*	RS14KB3D3R9J	FL-PROOF RS 3.9 J 2W		
R44		*	RD14NB2E181J	RD 180 J 1/4W		
R46		*	RD14NB2E181J	RD 180 J 1/4W		
R48		*	RD14NB2E181J	RD 180 J 1/4W		
R50		*	RD14NB2E181J	RD 180 J 1/4W		
R64		*	R92-0221-05	FUSE RESIST 18 G 1/4W		
R71 ,72			RS14KB3A561J	FL-PROOF RS 560 J 1W		
R73 ,74			RS14KB3D221J	FL-PROOF RS 220 J 2W		
R76			RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W		
R77 -80			RS14KB3D221J	FL-PROOF RS 220 J 2W		
R81		*	RS14KB3D3R9J	FL-PROOF RS 3.9 J 2W		
⚠ R98			R92-0173-05	RC 2.2M M 1/2W	KP	
⚠ K1			S76-0002-05	MAGNETIC RELAY		
K2 ,3			S51-2078-05	MAGNETIC RELAY		
K4 ,5		*	S76-0005-05	MAGNETIC RELAY		
⚠ S1	1C		S31-2136-05	SLIDE SWITCH(IMPEDANCE SELECT)		
⚠ S2	1C		S31-3010-05	SLIDE SWITCH(POWER TYPE)	MY	
D1 -5			S5688B	DIODE		
D1 -5			1SR139-100	DIODE		
D6			HZS6.2N(B2)	ZENER DIODE		
D6			RD6.2ES(B2)	ZENER DIODE		
⚠ D9		*	D5SBA20	DIODE		
D10 ,11			S5688B	DIODE		
D10 ,11			1SR139-100	DIODE		
D12			HZS4.7N(B)	ZENER DIODE		
D12			RD4.7ES(B)	ZENER DIODE		
D13			S5688B	DIODE		
D13			1SR139-100	DIODE		
D17 ,18			HZS18N(B2)	ZENER DIODE		
D17 ,18			RD18ES(B2)	ZENER DIODE		
⚠ D19			D3SBA20F03	DIODE		
⚠ D19			RBV-402LFA	DIODE		
D20			HZS8.2N(B2)	ZENER DIODE		
D20			RD8.2ES(B2)	ZENER DIODE		
D21			HZS6.8N(B2)	ZENER DIODE		
D21			RD6.8ES(B2)	ZENER DIODE		
D22 -27			HSS104A	DIODE		
D22 -27			1SS131	DIODE		
D28			HZS6.8N(B2)	ZENER DIODE		
D28			RD6.8ES(B2)	ZENER DIODE		
D29 -35			HSS104A	DIODE		
D29 -35			1SS131	DIODE		

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No.6

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
D36			HZS4.7N(B)	ZENER DIODE		
D36			RD4.7ES(B)	ZENER DIODE		
D51 -62			HSS104A	DIODE		
D51 -62			1SS131	DIODE		
D63 ,64			HZS5.6N(B2)	ZENER DIODE		
D63 ,64			RD5.6ES(B2)	ZENER DIODE		
IC1 ,2			TC4053BP	IC(3-INPUT 2CH MPX/DE-MPX)		
IC1 ,2		*	XRU4053B	IC(3-INPUT 2CH MPX/DE-MPX)		
Q1 ,2			2SC2878(B)	TRANSISTOR		
Q3			2SC4137(V,W)	TRANSISTOR		
⚠ Q4			2SD1893*5	TRANSISTOR		
⚠ Q5			2SB1253*5	TRANSISTOR		
Q6			2SC1845(F,E)	TRANSISTOR		
Q11			2SD1302(S,T)	TRANSISTOR		
Q12			2SD1266	TRANSISTOR		
Q13			2SB941	TRANSISTOR		
Q14			2SD1266	TRANSISTOR		
Q15 ,16			2SC1740S(Q,R)	TRANSISTOR		
Q15 ,16			2SC2458(Y,GR)	TRANSISTOR		
Q17 ,18			2SA1048(Y,GR)	TRANSISTOR		
Q17 ,18			2SA933S(Q,R)	TRANSISTOR		
Q19			2SD1266	TRANSISTOR		
Q20			2SA992(F,E)	TRANSISTOR		
Q21 -24			2SC1740S(Q,R)	TRANSISTOR		
Q21 -24			2SC2458(Y,GR)	TRANSISTOR		
Q25 ,26			2SC1845(F,E)	TRANSISTOR		
Q27 ,28			2SA992(F,E)	TRANSISTOR		
Q51 -56			2SC2320(E,F)	TRANSISTOR		
Q57 ,58			2SC2878(B)	TRANSISTOR		
Q59			2SC2320(E,F)	TRANSISTOR		
Q60			2SA1048(Y,GR)	TRANSISTOR		
Q60			2SA933S(Q,R)	TRANSISTOR		
Q61 ,62			2SD882	TRANSISTOR		
Q63 ,64			2SB772	TRANSISTOR		
TUNER UNIT (X05-3530-12)						
C1 ,2			CK45FF1H103Z	CERAMIC 0.010UF Z		
C3			CC93FCH1H391J	CERAMIC 390PF J		
C4			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C5			CE04LW1V100M	ELECTRO 10UF 35WV		
C6			CK45FF1H103Z	CERAMIC 0.010UF Z		
C7			CK45FF1H223Z	CERAMIC 0.022UF Z		
C8 ,9			CK45FF1H103Z	CERAMIC 0.010UF Z		
C10			CK45FF1H223Z	CERAMIC 0.022UF Z		
C11 ,12			CK45FF1H103Z	CERAMIC 0.010UF Z		
C13 -15			CE04LW1C470M	ELECTRO 47UF 16WV		
C16			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C17			CE04LW1H3R3M	ELECTRO 3.3UF 50WV		
C18			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C19			CF92FV1H223J	MF 0.022UF J		
C20			CF92FV1H273J	MF 0.027UF J		
C21			CK45FF1H223Z	CERAMIC 0.022UF Z		
C22			CC45FSL1H101J	CERAMIC 100PF J		
C23			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C24			CF92FV1H273J	MF 0.027UF J		
C25			CC45FCH1H220J	CERAMIC 22PF J		

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No.7

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C26			CK45FF1H103Z	CERAMIC 0.010UF Z		
C27			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C28			CC45FCH1H220J	CERAMIC 22PF J		
C29 -31			CC45FSL1H101J	CERAMIC 100PF J		
C32			CK45FF1H103Z	CERAMIC 0.010UF Z		
C33 ,34			CF92FV1H682J	MF 6800PF J	E	
C35			CC93FCH1H471J	CERAMIC 470PF J		
C36 ,37			CF92FV1H273J	MF 0.027UF J	MY	
C36 ,37			CF92FV1H433J	MF 0.043UF J	KP	
C38 ,39			CF92FV1H153J	MF 0.015UF J	MY	
C40			CE04LW1H3R3M	ELECTRO 3.3UF 50WV		
C41 -43			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C44			CK45FB1H471K	CERAMIC 470PF K		
C45			CF92FV1H473J	MF 0.047UF J		
C46			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C47			CE04LW1C470M	ELECTRO 47UF 16WV	E	
C48			CE04LW1V100M	ELECTRO 10UF 35WV		
C49			CE04LW1C470M	ELECTRO 47UF 16WV		
C50 ,51			CE04LW1C220M	ELECTRO 22UF 16WV	E	
C52 ,53			CC45FSL1H151J	CERAMIC 150PF J	KPMY	
C52 ,53			CF92FV1H122J	MF 1200PF J	E	
C54			CC45FSL1H151J	CERAMIC 150PF J	E	
TC1 ,2			C05-0303-05	CERAMIC TRIMMER CAPACITOR(20PF		
E2	2D		E20-0321-05	LOCK TERMINAL BOARD(ANTENNA)		
CF1 ,2			L72-0531-05	CERAMIC FILTER	KPMY	
CF1 ,2			L72-0536-05	CERAMIC FILTER	E	
CF3			L72-0099-05	CERAMIC FILTER		
CF4			L72-0096-05	CERAMIC FILTER		
L1			L40-1091-17	SMALL FIXED INDUCTOR(1.0uH)		
L2			L40-1021-14	SMALL FIXED INDUCTOR(1.0mH,K)		
L3			L40-1091-17	SMALL FIXED INDUCTOR(1.0uH)		
L4			L30-0484-05	FM IFT (DISCRIMINATOR)		
L5			L30-0485-05	FM IFT (DISTORTION/MONO)		
L6			L79-0125-05	LC FILTER	E	
L7			L79-0739-05	LC FILTER	E	
L8			L31-0509-05	MW-RF COIL (RF ALIGNMENT)		
L9			L32-0277-15	MW OSC COIL(BAND EDGE L)		
L10			L30-0362-05	AM IFT (IF TRANSFORMER)		
X1			L77-1122-05	CRYSTAL RESONATOR(7.2MHz)		
R14			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
R22 ,23			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
R24			RD14GB2E221J	FL-PROOF RD 220 J 1/4W		
R45			RD14GB2E101J	FL-PROOF RD 100 J 1/4W	E	
R53			RD14GB2E330J	FL-PROOF RD 33 J 1/4W		
VR1			R12-3130-05	TRIMMING POT(33K) (FM T-LEVEL)		
VR2			R12-3126-05	TRIMMING POT(10K) (AM T-LEVEL)		
VR3			R12-1089-05	TRIMMING POT(4.7K)(VCO)		
VR4			R12-6016-05	TRIMMING POT(330K)(SEPARATION)	E	
VR4			R12-8015-05	TRIMMING POT(1M) (SEPARATION)	KPMY	
S1	2D		S31-2072-05	SLIDE SWITCH (DEEM,CH SP)	MY	
D1 ,2			1SS133	DIODE		
D1 ,2			1SS176	DIODE		
D3			HZS5.1N(B2)	ZENER DIODE		

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No.8

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
D3			RD5.1ES(B2)	ZENER DIODE		
D4 -6			1SS133	DIODE		
D4 -6			1SS176	DIODE		
D7			KV1236(Z2)	VARIABLE CAPACITANCE DIODE		
IC1			LA1265	IC(FM/AM TUNER)		
IC2			LM7001	IC(PLL FREQUENCY SYNTHESIZER)		
IC3			AN7470	IC(FM MPX)		
Q1			2SC1923(R,O)	TRANSISTOR		
Q2			2SC1740S(Q,R)	TRANSISTOR		
Q2			2SC945(A)(Q,P)	TRANSISTOR		
Q3			2SC1845(F,E)	TRANSISTOR		
Q4			2SC1740S(Q,R)	TRANSISTOR	E	
Q4			2SC945(A)(Q,P)	TRANSISTOR	E	
Q5 ,6			2SC1740S(Q,R)	TRANSISTOR	MY	
Q5 ,6			2SC945(A)(Q,P)	TRANSISTOR	MY	
Q7 ,8			2SA733(A)(Q,P)	TRANSISTOR		
Q7 ,8			2SA933S(Q,R)	TRANSISTOR		
665	2D		W02-0699-05	FM FRONT-END ASSY	KPMY	
665	2D		W02-0700-05	FM FRONT-END ASSY	E	
PREAMPLIFIER UNIT (X08-2440-10)						
C1 -10			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C11 ,12			CC45FSL1H101J	CERAMIC 100PF J		
C13			CE04LW1C470M	ELECTRO 47UF 16WV		
C14			CQ92FM1H472J	MYLAR 4700PF J		
C15			CE04LW1C470M	ELECTRO 47UF 16WV		
C16			CE04LW1V100M	ELECTRO 10UF 35WV		
C17 -20			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C21 -24			CQ92FM1H103J	MYLAR 0.010UF J		
C25 -28			CF92FV1H433J	MF 0.043UF J		
C29 -32			CK45FB1H821K	CERAMIC 820PF K		
C33 ,34			CQ92FM1H102J	MYLAR 1000PF J		
C35 -38			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C39			CE04LW1C470M	ELECTRO 47UF 16WV		
C40			CF92FV1H334J	MF 0.33UF J		
C41			CF92FV1H104J	MF 0.10UF J		
C42			CF92FV1H333J	MF 0.033UF J		
C43			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C44			CQ92FM1H472J	MYLAR 4700PF J		
C45			CF92FV1H273J	MF 0.027UF J		
C46			CE04LW1C220M	ELECTRO 22UF 16WV		
C47			CE04LW1C101M	ELECTRO 100UF 16WV		
C48			CQ92FM1H822J	MYLAR 8200PF J		
C49			CE04LW1V100M	ELECTRO 10UF 35WV		
C50 -54			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C55 ,56			CC45FSL1H101J	CERAMIC 100PF J		
C57 ,58			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C59			CE04LW1C470M	ELECTRO 47UF 16WV		
C60			CQ92FM1H472J	MYLAR 4700PF J		
C61			CE04LW1C470M	ELECTRO 47UF 16WV		
C62			CE04LW1V100M	ELECTRO 10UF 35WV		
C63 ,64			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C65			CQ92FM1H103J	MYLAR 0.010UF J		
C66			CE04LW1V100M	ELECTRO 10UF 35WV		
C67 -72			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		

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No.9

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Destination 仕向	Remarks 備考
C73			CE04LW1C470M	ELECTRO 47UF 16WV		
C74			CQ92FM1H103J	MYLAR 0.010UF J		
C75			CF92FV1H104J	MF 0.10UF J		
C76			CE04LW1V100M	ELECTRO 10UF 35WV		
C77			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C78			CQ92FM1H103J	MYLAR 0.010UF J		
C79			CF92FV1H104J	MF 0.10UF J		
C81			CE04LW1C101M	ELECTRO 100UF 16WV		
C82			CE04LW0J331M	ELECTRO 330UF 6.3WV		
C83			CQ92FM1H102J	MYLAR 1000PF J		
C84			CE04LW1A101M	ELECTRO 100UF 10WV		
C86			CE04LW1A470M	ELECTRO 47UF 10WV		
C87 ,88			CC45FSL1H101J	CERAMIC 100PF J		
C89 ,90			CQ92FM1H102J	MYLAR 1000PF J		
C91 -94			CQ92FM1H103J	MYLAR 0.010UF J		
C95			CE04LW1V100M	ELECTRO 10UF 35WV		
C96			CQ92FM1H102J	MYLAR 1000PF J		
C97			CE04LW1V100M	ELECTRO 10UF 35WV		
C98			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C99			CQ92FM1H102J	MYLAR 1000PF J		
C100			CF92FV1H104J	MF 0.10UF J		
C102			CQ92FM1H102J	MYLAR 1000PF J		
C105			CF92FV1H104J	MF 0.10UF J		
C106-108			CQ92FM1H102J	MYLAR 1000PF J		
C109			CE04LW0J331M	ELECTRO 330UF 6.3WV		
C110			CF92FV1H104J	MF 0.10UF J		
C111			CE04LW0J331M	ELECTRO 330UF 6.3WV		
C112			CF92FV1H104J	MF 0.10UF J		
C113			CE04LW0J331M	ELECTRO 330UF 6.3WV		
C114			CF92FV1H104J	MF 0.10UF J		
C115			CE04LW0J331M	ELECTRO 330UF 6.3WV		
C116			CF92FV1H104J	MF 0.10UF J		
C117			CK45FF1H103Z	CERAMIC 0.010UF Z		
C118			CE04LW0J331M	ELECTRO 330UF 6.3WV		
C119			CE04LW1A101M	ELECTRO 100UF 10WV		
C120			CF92FV1H104J	MF 0.10UF J		
C121			CE04LW1A101M	ELECTRO 100UF 10WV		
C122			CF92FV1H104J	MF 0.10UF J		
C123,124			CC45FCH1H220J	CERAMIC 22PF J		
C125-128			CQ92FM1H103J	MYLAR 0.010UF J		
C129			CQ92FM1H102J	MYLAR 1000PF J		
C130,131			CF92FV1H104J	MF 0.10UF J		
C132,133			CQ92FM1H102J	MYLAR 1000PF J		
C134-139			CC45FSL1H470J	CERAMIC 47PF J		
C140			CQ92FM1H102J	MYLAR 1000PF J		
C141			CC45FSL1H221J	CERAMIC 220PF J		
C142-144			CK45FF1H103Z	CERAMIC 0.010UF Z		
L1 -7			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
X1			L78-0277-05	RESONATOR (12MHz)		
X2			L78-0244-05	RESONATOR (4MHz)		
X3		*	L77-1199-05	CRYSTAL RESONATOR(18.432MHz)		
CP1			R90-0482-05	MULTI-COMP 100KX4 J 1/6W		
CP2		*	R90-0875-05	MULTIPLE RESISTOR 100KX5		
CP3			R90-0493-05	MULTI-COMP 100KX9 J 1/6W		

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No.10

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Destination 仕向	Remarks 備考
CP4			R90-0864-05	MULTIPLE RESISTOR 100KX14		
CP5 ,6			R90-0493-05	MULTI-COMP 100KX9 J 1/6W		
CP7			R90-0803-05	MULTI-COMP 100KX7 J 1/4W		
CP8			R90-0855-05	MULTI-COMP 100KX5 J		
R17 ,18			RD14NB2E221J	RD 220 J 1/4W		
R22			RS14KB3D470J	FL-PROOF RS 47 J 2W		
R24			RS14KB3D220J	FL-PROOF RS 22 J 2W		
R27 ,28			RD14NB2E1R0J	RD 1.0 J 1/4W		
R67			RD14NB2E470J	RD 47 J 1/4W		
R78 ,79			RD14NB2E221J	RD 220 J 1/4W		
R80 ,81			RS14KB3D470J	FL-PROOF RS 47 J 2W		
R83 ,84			RS14KB3D680J	FL-PROOF RS 68 J 2W		
R86			RS14KB3A121J	FL-PROOF RS 120 J 1W		
R87			RS14KB3A221J	FL-PROOF RS 220 J 1W		
R90			RS14KB3A221J	FL-PROOF RS 220 J 1W		
D1 -4			HZS13N(B2)	ZENER DIODE		
D1 -4			RD13ES(B2)	ZENER DIODE		
D5 -13			HSS104	DIODE		
D5 -13			1SS133	DIODE		
IC1			AN1431T	IC(VOLTAGE REGULATOR)		
IC1			TL431CLP	IC(VOLTAGE REGULATOR)		
IC2			NJM78L05A	IC(VOLTAGE REGULATOR/ +5V)		
IC4			TC9213P	IC(2CH ELECTRONIC VOLUME)		
IC5 -8			NJM4565D	IC(OP AMP X2)		
IC5 -8			RC4565D	IC(OP AMP X2)		
IC9			LA2730	IC(DOLBY SYSTEM)		
IC10			TC9213P	IC(2CH ELECTRONIC VOLUME)		
IC11-14			NJM4565D	IC(OP AMP X2)		
IC11-14			RC4565D	IC(OP AMP X2)		
IC15,16			M5238P	IC(DUAL OP AMP)		
IC17			CS5326-KP	IC(D/A CONVERTER)		
IC18		*	TC74HC113AP	IC(DUAL J-K FF)		
IC19			TC74HC08AP	IC(MASTER CLOCK)		
IC20,21			TC74HC74AP	IC(DUAL D-TYPE FLIP FLOP)		
IC22,23			M5238P	IC(DUAL OP AMP)		
IC25,26		*	LC7883K	IC(D/A CONVERTER)		
IC27,28			LM33464G-12	IC(D-RAM)		
IC29			LC83010	IC(DSP)		
IC30		*	LC66516B-4677	IC(DSP u-COM)		
IC31		*	UPD78214CW-744	IC(AMP u-COM)		
IC32			NJM79L05A	IC(VOLTAGE REGULATOR/ +5V)		
IC33,34			NJM78L05A	IC(VOLTAGE REGULATOR/ +5V)		
Q3 ,4			2SD1266	TRANSISTOR		
AUDIO UNIT (X09-3270-10)						
C3 ,4			CE04LW1V100M	ELECTRO 10UF 35WV		
C5 ,6			CC45FSL1H221J	CERAMIC 220PF J		
C7 ,8			CK45FB1H102K	CERAMIC 1000PF K	E	
C9 ,10			CE04LW1A101M	ELECTRO 100UF 10WV		
C11 ,12			CF92FV1H123J	MF 0.012UF J		
C13 ,14			CF92FV1H332J	MF 3300PF J		
C15 ,16			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C17 -42			CC45FSL1H221J	CERAMIC 220PF J		
C43 ,44			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C45 ,46			CC45FSL1H101J	CERAMIC 100PF J	E	

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No.11

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C47 ,48			CE04LW1V100M	ELECTR@ 10UF 35WV		
C49 ,50			CE04LW1V4R7M	ELECTR@ 4.7UF 35WV		
C51 ,52			CE04LW1V100M	ELECTR@ 10UF 35WV		
C53 ,54			CE04LW1V4R7M	ELECTR@ 4.7UF 35WV		
C57 ,58			CK45FB1H471K	CERAMIC 470PF K		
C59 ,60			CE04LW1V4R7M	ELECTR@ 4.7UF 35WV		
C61 ,62			CK45FF1H103Z	CERAMIC 0.010UF Z		
C63 ,64			CE04LW1H010M	ELECTR@ 1.0UF 50WV		
C65 ,66			CK45FF1H103Z	CERAMIC 0.010UF Z		
C67 ,68			CF92FV1H104J	MF 0.10UF J	E	
C67 ,68			CF92FV1H473J	MF 0.047UF J	KPMY	
C69 -72			CF92FV1H104J	MF 0.10UF J	E	
C73 ,74			CC45FSL1H220J	CERAMIC 22PF J		
C75 ,76			CC45FSL1H101J	CERAMIC 100PF J	E	
C77 ,78			CE04JW1H010M	ELECTR@ 1.0UF 50WV		
C81 ,82			CK45FB1H471K	CERAMIC 470PF K		
C83			CK45FF1H103Z	CERAMIC 0.010UF Z		
C84			CE04LW1H010M	ELECTR@ 1.0UF 50WV		
C85			CK45FF1H103Z	CERAMIC 0.010UF Z		
C86			CF92FV1H104J	MF 0.10UF J	E	
C86			CF92FV1H473J	MF 0.047UF J	KPMY	
C87			CF92FV1H104J	MF 0.10UF J	E	
C88			CC45FSL1H220J	CERAMIC 22PF J		
C89 ,90			CC45FSL1H101J	CERAMIC 100PF J	E	
C92			CE04JW1H2R2M	ELECTR@ 2.2UF 50WV		
C93			C90-1398-05	NP-ELEC 0.33UF 50WV		
C94			CE04LW1H2R2M	ELECTR@ 2.2UF 50WV		
C95			C90-1398-05	NP-ELEC 0.33UF 50WV		
C96			CE04JW1H2R2M	ELECTR@ 2.2UF 50WV		
C97			C90-1398-05	NP-ELEC 0.33UF 50WV		
C98			CE04LW1H2R2M	ELECTR@ 2.2UF 50WV		
C99			CE04LW1V100M	ELECTR@ 10UF 35WV		
C100			CK45FF1H103Z	CERAMIC 0.010UF Z		
C101			CE04LW1C101M	ELECTR@ 100UF 16WV		
C102			CE04LW1H2R2M	ELECTR@ 2.2UF 50WV		
C110-112			CK45FB1H102K	CERAMIC 1000PF K		
C113			CK45FB1H471K	CERAMIC 470PF K		
C114			CE04LW1H010M	ELECTR@ 1.0UF 50WV		
C116			CE04LW1C101M	ELECTR@ 100UF 16WV		
C117,118			CE04LW1C221M	ELECTR@ 220UF 16WV		
C119			CE04LW1V4R7M	ELECTR@ 4.7UF 35WV		
CN9			E10-0308-05	FLAT CABLE C@NNECTOR		
J1	2D		E13-0634-05	PH@N@ JACK(PH@N@,CD,TAPE1 REC)		
J2	2D		E13-0820-05	PH@N@ JACK(TAPE1 PLAY,TAPE2)		
J3	2D		E13-0634-05	PH@N@ JACK(DAT,VIDE@1)		
J4	2D		E13-0446-05	PH@N@ JACK(VIDE@2)		
L1 -3			L39-0085-05	PHASE-C@MPENSATI@N C@IL		
A			N89-3008-45	BINDING HEAD TAPTITE SCREW		
B			N89-3008-46	BINDING HEAD TAPTITE SCREW		
H			N09-0333-05	TAPPING SCREW (3X12)		
CP1 -3			R90-0826-05	MULTIPLE RESISTOR 0.22X2		
R107-110			RD14NB2E220J	RD 22 J 1/4W		
R111-114			RD14NB2E221J	RD 220 J 1/4W		

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No.12

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
R115-118			RD14NB2E2R2J	RD 2.2 J 1/4W		
R119,120			RS14KB3D4R7J	FL-PR@@F RS 4.7 J 2W		
R121,122			RS14KB3A4R7J	FL-PR@@F RS 4.7 J 1W		
R125,126			RD14NB2E822J	RD 8.2K J 1/4W		
R129,130			RS14KB3D4R7J	FL-PR@@F RS 4.7 J 2W	E	
R158,159			RD14NB2E470J	RD 47 J 1/4W		
R160			RD14NB2E822J	RD 8.2K J 1/4W		
R162			RS14KB3D4R7J	FL-PR@@F RS 4.7 J 2W		
R163			RS14KB3A4R7J	FL-PR@@F RS 4.7 J 1W		
R203			RD14NB2E100J	RD 10 J 1/4W		
R207-209			RD14NB2E470J	RD 47 J 1/4W		
VR1 -3			R12-1083-05	TRIM P@T. 1K		
D1 -12			HSS104A	DI@DE		
D1 -12			1SS131	DI@DE		
D17 -19			HZS4.7N(B)	ZENER DI@DE		
D17 -19			RD4.7ES(B)	ZENER DI@DE		
D20 ,21			HSS104A	DI@DE		
D20 ,21			1SS131	DI@DE		
D22			HZS5.1N(B2)	ZENER DI@DE		
D22			RD5.1ES(B2)	ZENER DI@DE		
D23			HZS4.7N(B)	ZENER DI@DE		
D23			RD4.7ES(B)	ZENER DI@DE		
D24 -26			HSS104A	DI@DE		
D24 -26			1SS131	DI@DE		
IC1			NJM4580D-D	IC(@P AMP X2)		
IC2			TC9163N	IC(BILATERAL SWITCH X16)		
IC3			TC9164N	IC(16CH BILATERAL SELECT@R SW)		
IC4			TC9162N	IC(ANAL@G SWITCH ARRAY)		
IC5			NJM4565D	IC(@P AMP X2)		
IC5			RC4565D	IC(@P AMP X2)		
IC6			NJM4580D-D	IC(@P AMP X2)		
IC7			NJM4565D	IC(@P AMP X2)		
IC7			RC4565D	IC(@P AMP X2)		
IC8			TA8409S	IC(M@T@R C@NTR@L)		
IC9			NJM4580D-D	IC(@P AMP X2)		
Q1 -4			2SC2878(B)	TRANSISTOR		
Q5 ,6			2SC4137(V,W)	TRANSISTOR		
Q7 ,8			2SC3944A(Q,R)	TRANSISTOR		
Q9 ,10			2SA1535A(Q,R)	TRANSISTOR		
Q11 ,12			2SC2922*5	TRANSISTOR		
Q13 ,14			2SA1216*5	TRANSISTOR		
Q15 ,16			2SC1845(F,E)	TRANSISTOR		
Q17			2SC4137(V,W)	TRANSISTOR		
Q18			2SD2222*5	TRANSISTOR		
Q19			2SB1470*5	TRANSISTOR		
Q21 ,22			2SC2878(B)	TRANSISTOR		
Q26			2SC1845(F,E)	TRANSISTOR		
Q27 -31			2SA1048(Y,GR)	TRANSISTOR		
Q27 -31			2SA933S(Q,R)	TRANSISTOR		
Q32			2SC2003(L,K)	TRANSISTOR		

SUB CIRCUIT UNIT (X13-6930-10)

C1 -3			CE04LW1V4R7M	ELECTR@ 4.7UF 35WV		
C4		*	CE04LW1C4R7M	ELECTR@ 4.7UF 16WV		
C5			C90-1333-05	NP-ELEC 22UF 10WV		

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No.13

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C6 ,7			CE04LW1C220M	ELECTR@ 22UF 16WV		
R16 ,17			RD14NB2E391J	RD 390 J 1/4W		
D1 -5			HSS104	DI@DE		
D1 -5			1SS133	DI@DE		
D6 ,7			HZS6.8N(B2)	ZENER DI@DE		
D6 ,7			RD6.8ES(B2)	ZENER DI@DE		
IC1 ,2			NJM4565D-A	IC(@P AMP X2)		
Q1			2SC2878(A,B)	TRANSISTOR		
DISPLAY UNIT (X14-3010-10)						
D27			B30-0431-05	LED(LN21CPH)(STAND-BY)		
C1			CE04LW1H010M	ELECTR@ 1.0UF 50WV		
C2			CK45FF1H223Z	CERAMIC 0.022UF Z		
C3			CE04LW1A101M	ELECTR@ 100UF 10WV		
C4			C90-1827-05	BACKUP 0.047F 5.5WV		
C5			CE04LW1A101M	ELECTR@ 100UF 10WV		
C6			CK45FF1H103Z	CERAMIC 0.010UF Z		
C7 ,8			CC45FCH1H101J	CERAMIC 100PF J		
C9 -14			CC45FSL1H221J	CERAMIC 220PF J		
C15			CE04LW1A101M	ELECTR@ 100UF 10WV		
C16			CK45FF1H103Z	CERAMIC 0.010UF Z		
C17 ,18			CC45FCH1H101J	CERAMIC 100PF J		
C19 -24			CC45FSL1H221J	CERAMIC 220PF J		
C25			CE04LW1A101M	ELECTR@ 100UF 10WV		
C26			C91-0749-05	CERAMIC 220PF K		
C27			CC45FSL1H221J	CERAMIC 220PF J		
C28 ,29			CE04LW1H100M	ELECTR@ 10UF 50WV		
C101,102			CQ92FM1H122J	MYLAR 1200PF J		
C103,104			CF92FV1H333J	MF 0.033UF J		
C105			CF92FV1H104J	MF 0.10UF J		
C106			C90-1333-05	NP-ELEC 22UF 10WV		
C111,112			CE04CW1H010M	ELECTR@ 1.0UF 50WV		
C113,114			CF92FV1H473J	MF 0.047UF J		
C115			CC45FSL1H221J	CERAMIC 220PF J		
C116			C91-0749-05	CERAMIC 220PF K		
C117			CC45FSL1H221J	CERAMIC 220PF J		
C118			C91-0749-05	CERAMIC 220PF K		
C119			CC45FSL1H470J	CERAMIC 47PF J		
C120			C91-0737-05	CERAMIC 47PF J		
C121-124			CE04CW1H010M	ELECTR@ 1.0UF 50WV		
C125-128			CE04CW1C100M	ELECTR@ 10UF 16WV		
C129,130			CE04JW1C220M	ELECTR@ 22UF 16WV		
C141,142			CK45FF1H103Z	CERAMIC 0.010UF Z		
J1	2A		E13-0311-05	PH@N@ JACK (VIDE@4)		
J2	2A		E06-0821-05	CYLINDRICAL RECEPTACLE(SVIDE@)		
X1			L78-0267-05	RES@NAT@R (4.1943MHz)		
X2 ,3			L78-0274-05	RES@NAT@R (600kHz)		
CP1			R90-0482-05	MULTI-C@MP 100KX4 J 1/6W		
CP2 ,3			R90-0856-05	MULTI-C@MP 10KX5 J		
CP4			R90-0815-05	MULTI RESIST@R 10KX7		
CP5			R90-0805-05	MULTI-C@MP 10KX8 J 1/4W		
CP6			R90-0809-05	MULTIPLE RESIST@R 10KX4		

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No.14

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
R111,112			RD14NB2E221J	RD 220 J 1/4W		
VR1	2C	*	R29-5049-05	P@TENTI@METER(V@LUME C@NTR@L)		
VR2	3B		R06-5134-05	P@TENTI@METER(BALANCE)		
VR3	3B	*	R06-5186-05	P@TENTI@METER(L@UDNESS)		
VR4 ,5	1B	*	R10-3044-15	P@TENTI@METER(TREBLE,BASS)		
S1 -48	1A		S40-1064-05	PUSH SWITCH		
D1 -24			HSS104	DI@DE		
D1 -24			1SS133	DI@DE		
D25			HZS3.9N(B2)	ZENER DI@DE		
D25			RD3.9ES(B2)	ZENER DI@DE		
D26			HZS4.7N(B)	ZENER DI@DE		
D26			RD4.7ES(B)	ZENER DI@DE		
D141-146			HSS104	DI@DE		
D141-146			1SS133	DI@DE		
ED1	1B	*	16-MT-29GK	FLU@RESCENT INDICAT@R TUBE		
IC1		*	XRM9021A	IC(R@M)		
IC2		*	UPD75116CW-179	IC(MICR@PR@CESS@R)		
IC3 ,4			UPD7537ACU-220	IC(MICR@PR@CESS@R)		
IC5			NJM4565D-D	IC(@P AMP X2)		
IC5			RC4565D-D	IC(@P AMP X2)		
Q1			2SA1048(Y,GR)	TRANSIST@R		
Q1			2SA933S(Q,R)	TRANSIST@R		
Q2			2SC1740S(Q,R)	TRANSIST@R		
Q2			2SC2458(Y,GR)	TRANSIST@R		
Q3 -12			DTA124ES	DIGITAL TRANSIST@R		
Q3 -12			RN2203	DIGITAL TRANSIST@R		
Q13 -15			2SC1740S(Q,R)	TRANSIST@R		
Q13 -15			2SC2458(Y,GR)	TRANSIST@R		
Q16 -19			DTA124ES	DIGITAL TRANSIST@R		
Q16 -19			RN2203	DIGITAL TRANSIST@R		
A1	1B		W02-0975-05	ELECTRIC CIRCUIT MODULE		
POWER AMPLIFIER UNIT (X85-1190-00)						
C1 ,2			CE04LW1H010M	ELECTR@ 1.0UF 50WV		
C3 -6			CC45FSL1H101J	CERAMIC 100PF J		
C7 ,8			CE04LW1A101M	ELECTR@ 100UF 10WV		
C9 -12			CK45FF1H103Z	CERAMIC 0.010UF Z		
C13 ,14			CC45FSL1H220J	CERAMIC 22PF J		
C15 ,16			CC45FSL1H150J	CERAMIC 15PF J		
C17 ,18			CC45FSL1H221J	CERAMIC 220PF J		
C19 ,20			CC45FSL1H070D	CERAMIC 7.0PF D		
C21			CE04LW2A220M	ELECTR@ 22UF 100WV		
C22			CE04LW2A101M	ELECTR@ 100UF 100WV		
C23			CE04LW1V100M	ELECTR@ 10UF 35WV		
C25 ,26			CC45FSL1H101J	CERAMIC 100PF J		
C31			CE04LW1H010M	ELECTR@ 1.0UF 50WV		
C32 ,33			CC45FSL1H101J	CERAMIC 100PF J		
C34			CE04LW1A470M	ELECTR@ 47UF 10WV		
C35			CC45FSL1H470J	CERAMIC 47PF J		
C36			CC45FSL1H221J	CERAMIC 220PF J		
C37			CC45FSL1H020C	CERAMIC 2.0PF C		
C38			CC45FSL1H470J	CERAMIC 47PF J		
C41			CE04LW1H010M	ELECTR@ 1.0UF 50WV		
C42			CC45FSL1H221J	CERAMIC 220PF J		

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Teile ohne Parts No. werden nicht geliefert.

No.15

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C43			CC45FSL1H101J	CERAMIC 100PF J		
C44			CE04LW1A470M	ELECTRO 47UF 10WV		
C45			CC45FSL1H470J	CERAMIC 47PF J		
C46			CC45FSL1H221J	CERAMIC 220PF J		
C47			CC45FSL1H020C	CERAMIC 2.0PF C		
C48 ,49			CE04LW1V470M	ELECTRO 47UF 35WV		
C50			CC45FSL1H470J	CERAMIC 47PF J		
C51 ,52			CE04LW2A010M	ELECTRO 1.0UF 100WV		
R15 -18		*	R92-1742-05	CARBON FILM RESISTOR 2.2K		
R19 ,20			RD14NB2E151J	RD 150 J 1/4W		
R27 -30			RD14NB2E221J	RD 220 J 1/4W		
R31 ,32			RD14NB2E470J	RD 47 J 1/4W		
R47			RD14NB2E151J	RD 150 J 1/4W		
R51 ,52			RD14NB2E221J	RD 220 J 1/4W		
R67			RD14NB2E151J	RD 150 J 1/4W		
R70 ,71			RD14NB2E221J	RD 220 J 1/4W		
R72 ,73			RD14NB2E470J	RD 47 J 1/4W		
D1 -3			HSS104	DIODE		
D1 -3			1SS133	DIODE		
D4			HZS5.1S(B2)	ZENER DIODE		
D4			RD5.1JS(B2)	ZENER DIODE		
D6 ,7			HSS104	DIODE		
D6 ,7			1SS133	DIODE		
Q1 -4			2SA992(F,E)	TRANSISTOR		
Q5 -10			2SA1048(Y,GR)	TRANSISTOR		
Q5 -10			2SA933S(Q,R)	TRANSISTOR		
Q11 -14			2SC2631(R,S)	TRANSISTOR		
Q15 ,16			2SA1123(R,S)	TRANSISTOR		
Q21 ,22			2SA992(F,E)	TRANSISTOR		
Q23 ,24			2SC2631(R,S)	TRANSISTOR		
Q25			2SA1123(R,S)	TRANSISTOR		
Q31 ,32			2SA992(F,E)	TRANSISTOR		
Q33 ,34			2SC1845(F,E)	TRANSISTOR		
Q35			2SA992(F,E)	TRANSISTOR		

E: Scandinavia & Europe K: USA P: Canada
Y: PX(Far East, Hawaii) T: England M: Other Aeas
Y: AAFES (Europe) X: Australia

⚠ indicates safety critical components.

SPECIFICATIONS

KR-V9030

⚠Caution: Read this page carefully to ensure safe operation.

(For U.S.A. and Canada)

Audio section

Rated power output at the STEREO operation

120 watts per channel minimum RMS, both channels driven at 8 Ω, from 20 Hz to 20,000 Hz with no more than 0.03% total harmonic distortions. (FTC)

Power output at the Surround operation
- Front (1 kHz, 0.9% T.H.D. at 8 Ω)..... 75 W + 75 W
- Center (1 kHz, 0.9% T.H.D. at 8 Ω) ..... 75 W
- Rear (1 kHz, 0.9% T.H.D. at 8 Ω)..... 20 W + 20 W

Total harmonic distortion (1 kHz, 8 Ω)... 0.003% at 65 W

Frequency response
- CD..... 10 Hz ~ 50 kHz, +0 dB, −3 dB

Signal to noise ratio (IHF-A)
- PHONO (MM)..... 78 dB for 5 mV input
- CD, TAPE, VIDEO ..... 100 dB for 200 mV input

Input sensitivity/impedance
- PHONO (MM)..... 2.5 mV/47 kΩ
- CD, TAPE, VIDEO..... 200 mV/47 kΩ

Tone controls
- BASS..... ±10 dB (at 100 Hz)
- TREBLE ..... ±10 dB (at 10 kHz)

Loudness control at −30 dB VOLUME level
..... +8 dB (100 Hz), +2dB (10 kHz) max.

Video section

VIDEO inputs/outputs
- (Composite)..... 1 Vp-p/75 Ω

S-VIDEO inputs/outputs
- (Luminance signal) ..... 1 Vp-p/75 Ω
- (Chrominance signal) ..... 0.286 Vp-p/75 Ω

FM Tuner section

Tuning frequency range ..... 87.5 MHz ~ 108 MHz
Antenna impedance ..... 75 Ω unbalanced

Sensitivity (IHF)..... 10.8 dBf (0.95 μV at 75 Ω)
50 dB quieting sensitivity
- MONO..... 16.2 dBf (3.5 μV at 75 Ω)
- STEREO..... 38.2 dBf (45 μV at 75 Ω)

Total harmonic distortion at 1,000 Hz
- MONO 0.1%
- STEREO 0.2%

Signal to noise ratio at 65 dBf (IHF)
- MONO..... 80 dB
- STEREO..... 74 dB

Selectivity (IHF ±400 kHz)..... 53 dB
Stereo separation (IHF at 1 kHz)..... 50 dB

Frequency response... 30 Hz ~ 15 kHz, +0.5 dB, −2.0 dB

AM Tuner section

Tuning frequency range..... 530 kHz ~ 1,700 kHz
Usable sensitivity..... 10 μV/(400 μV/m)
Total harmonic distortion..... 0.3%
Signal to noise ratio ..... 50 dB
Selectivity..... 25 dB

General

Power consumption..... 3 A
Dimensions ..... 440 (W) × 163 (H) × 415 (D) mm
(17-5/16") × (6-7/16") × (16-5/16")
Weight (net)..... 13.9 kg (30.6 lb)

AC outlets..... switched × 3, total 200 W, 1.6 A max.

(For other countries)

Audio section

Rated power output at the STEREO operation
(IHF '66) from 20 Hz to 20 kHz,
0.06% T.H.D., at 8 Ω..... 140 W + 140 W

Power output at the Surround operation
- Front (1 kHz, 0.9% T.H.D. at 8 Ω)..... 75 W + 75 W
- Center (1 kHz, 0.9% T.H.D. at 8 Ω) ..... 75 W
- Rear (1 kHz, 0.9% T.H.D. at 8 Ω)..... 20 W + 20 W

Total harmonic distortion (1 kHz, 8 Ω).... 0.03% at 65 W

Frequency response
- CD..... 10 Hz ~ 50 kHz, +0 dB, −3 dB

Signal to noise ratio (IHF-A)
- PHONO (MM)..... 78 dB for 5 mV input
- CD, TAPE, VIDEO ..... 100 dB for 200 mV input

Input sensitivity/impedance
- PHONO (MM)..... 2.5 mV/47 kΩ
- CD, TAPE, VIDEO..... 200 mV/47kΩ

Tone controls
- BASS..... ±10 dB (at 100 Hz)
- TREBLE ..... ±10 dB (at 10 kHz)

Loudness control at −30 dB VOLUME level
..... +8 dB (100 Hz), +2 dB (10 kHz) max.

VIDEO inputs/outputs
- (Composite)..... 1 Vp-p/75 Ω

S-VIDEO inputs/outputs
- (Luminance signal) ..... 1 Vp-p/75 Ω
- (Chrominance signal) ..... 0.286 Vp-p/75 Ω

FM Tuner section

Tuning frequency range ..... 87.5 MHz ~ 108 MHz
Antenna impedance.... 300 Ω balanced & 75 Ω unbalanced

Sensitivity (IHF)..... 10.8 dBf (0.95 μV at 75 Ω)
50 dB quieting sensitivity
- MONO..... 16.2 dBf (3.5 μV at 75 Ω)
- STEREO..... 38.2 dBf (45 μV at 75 Ω)

Total harmonic distortion at 1 kHz
- MONO 0.1%
- STEREO 0.2%

Signal to noise ratio at 65 dBf (IHF)
- MONO..... 80 dB
- STEREO..... 74 dB

Selectivity (IHF ±400 kHz)..... 53 dB
Stereo separation (IHF at 1 kHz)..... 50 dB

Frequency response... 30 Hz ~ 15 kHz, +0.5 dB, −2.0 dB

AM Tuner section

Tuning frequency range
- 9 kHz step..... 531 kHz ~ 1,602 kHz
- 10 kHz step..... 530 kHz ~ 1,610 kHz

Usable sensitivity ..... 10 μV/(400 μV/m)
Total harmonic distortion..... 0.3%
Signal to noise ratio ..... 50 dB
Selectivity..... 25 dB

General

Power consumption ..... 300 W (IEC)
dimensions..... 440 (W) × 163 (H) × 415 (D) mm
Weight (net) ..... 13.9 kg

AC outlets ..... switched × 200 W max.

Note:
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KR-V9030

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Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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